QUALIFYING REPORT
FOR
ASQUITH RESOURCES INC.
RE
MINING PROPERTIES
OF
ASQUITH RESOURCES INC. AND AXMIN LIMITED
LOCATED IN

CENTRAL AFRICAN REPUBLIC
TANZANIA
MALI
SENEGAL
AND
GHANA

Report No. 838

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Toronto, Ontario

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Clients Reference:

Asquith Resources Inc.

Qualifying Report on the Mining Properties of Asquith Resources Inc. and AXMIN Limited located in Central African Republic, Tanzania, Mali, Senegal, and Ghana.

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SUMMARY

At the request of Mr. Michael Coulter, President of Asquith Resources Inc. ("Asquith"), Toronto, Ontario, Canada, A. C. A. Howe International Limited ("Howe") has prepared this qualifying report (the "Report"), to the standards dictated by National Instrument 43-101, in respect of the mineral exploration properties of Asquith and AXMIN Limited ("AXMIN") located in Central African Republic, Mali, Tanzania, Ghana, and Senegal. It is Howe's understanding that this report will be used by Asquith and AXMIN (the "Companies") in a prospectus for financing purposes upon the merger of the two companies.

Asquith is a public company trading on the Canadian Venture Exchange ("CDNX"), incorporated in Ontario, with corporate offices located at Suite 600, 15 Toronto Street, Toronto, Ontario, Canada, M5C 2E3. AXMIN is a private company with a technical office located at Kent House, Suite 107, 81 Station Road, Ashford, Kent, England TN23 1PP.

The Companies' gross land holdings total 2,883 km^2 (2,702 net km^2). To put this in a Canadian perspective this is equivalent to 18,018 typical mining claims (40 acre/16 hectare units).

The Companies' Bambari (Central African Republic) and Kofi (Mali) projects have encountered potentially significant gold mineralisation in drill holes that warrant additional drilling. The Bambari and Kofi projects as well as the Satifara (Mali), Cape Three Points (Ghana), Sonkounkou (Senegal) and Siga Hills (Tanzania) projects all have gold occurrences and gold in-soil geochemical anomalies that have not been drilled and warrant follow-up drilling.

During the 2000 program on the Bambari project, AXMIN geologists discovered an extensive area of high-grade iron formation (63 to 69% total iron, equivalent to 90 to 99% Fe_2O_3) known as the Topa Iron Ore deposit. The surficial area and observed thickness of the iron formation indicate very large tonnage potential.

Site visits were carried out to the Companies' exploration properties in Central African Republic, Mali, and Ghana. The properties in Tanzania and Senegal were not visited as they are in very early stages of exploration and there was insufficient technical data that could have been validated by such a site visit.

In addition, Howe carried out discussions with the local management and technical personnel of Asquith and AXMIN. Howe's extensive experience in Precambrian lode gold deposits in Canada and Africa, and prior investigations of other gold deposits throughout the world, was also drawn upon.

Howe reviewed sampling procedures, sample handling and security, and analytical procedures (analytical methods, check assays, replicate assays, etc.) and has concluded that the Companies' procedures meet industry standards. In addition Howe took independent samples and had them assayed and concludes that there was no material difference in the assays obtained by Howe and those reported by the Companies.

Howe has concluded that all of the projects warrant additional exploration and has recommended an exploration project and budget based on a thorough review of all relevant data.

The recommended corporate budget for the next phase of exploration on the projects is C$3,514,000 for exploration plus corporate overheads of C$ 172,000 for a total of C$ 3,686,000. The Companies have a high degree of flexibility in the timing of completion of the financing for these programs, as they have no significant expenditure commitments that are driven by time sensitive joint venture requirements. The program will extend over an 18-month period to the end of 2002 due to interruptions in program schedules by the rainy season (July-October) in all parts of sub-Saharan Africa.

The following details the proposed exploration budget for the respective projects.

	Country	**Project**	**Hectares**	**18 mo. Budget**
(1)	Central African Republic	Bambari or Roandji project	205,821	C$ 1,082,000
(2)	Mali	Kofi project	25,975	1,271,000
(3)		Satifara project	4,290	89,000
(4)	Senegal	Sonkounkou project	34,100	300,000
(5)	Ghana	Cape Three Points project	7,522	660,000
(6)	Tanzania	Siga Hills project	10,580	112,000
	Totals		**288,288**	**C$ 3,514,000**

The Bambari project is the only property in which Asquith currently holds an interest.

The Precambrian rocks of Africa have historically been and continue to be the largest gold producing area in the world. All of the major gold mines in Africa occur in Precambrian rocks in a number of well-known, well described, and well understood geological environments. The largest gold production in the world is from South Africa, Witswatersrand-type gold deposits of Proterozoic age. Archean greenstone belt-type gold deposits (similar to those found in Canada) are known in Central African Republic, Tanzania, Democratic Republic of the Congo, South Africa, etc. The second largest source of gold in Africa is the Lower Proterozoic Birimian (shear zone hosted quartz veins in volcanic-sedimentary terrane) and Tarkwaian-types (paleo-placer gold deposits), originally discovered in Ghana and subsequently elsewhere in the West African Craton including Mali and Senegal.

The Companies' staged exploration approach in Africa has involved, definition on a regional scale of areas of favourable geological environments for known gold deposit types, followed by regional analysis of satellite imagery and regional geophysical data, leading to selection of areas for property acquisitions.

Land acquisition has been completed by direct acquisition from government agencies of exploration licences on behalf of the Companies or by wholly owned subsidiaries of the Companies (in countries that require land to be held through a locally incorporated entity), or by joint venture or farm-in agreements with other land holders.

Howe has reviewed relevant information with regard to regulations affecting mining in Central African Republic, Mali, Senegal, Ghana, and Tanzania and has concluded that there are no serious regulatory or political impediments to operation in those countries. The mining infrastructure required for a medium to large mining operation varies from very good (Ghana, Tanzania, Mali, and Senegal (via Mali)), to quite limited in Central African Republic. It is Howe's opinion, given the positive economic impact that a substantial mining operation would have on the economy of Central African Republic, that international funding should be available to the government of Central African Republic to provide the required infrastructure for a substantial mining operation.

The following project summaries have been arranged in a priority order from highest to lowest based on Howe's review of all relevant data for the projects.

(1) Central African Republic – Bambari Permit (also known as Roandji Project)

The 2,058.2 km^2 Bambari Permit area is located in the central part of the country and covers a 90 km strike length of the 250 km long Archean (early Precambrian) Bandas greenstone belt. The greenstone belt is composed of metavolcanic and metasedimentary rocks intruded by granitic rocks. The Archean rocks are overlain by younger (Proterozoic to recent) cover. Approximately 1,900 km^2 of the permit area is underlain by exposed, saprolitised greenstone lithologies, including approximately 840 km^2 underlain by banded iron formation.

The Bandas greenstone belt is considered to be the northwestern extension of the Kibali-Ituri greenstone belt of the Democratic Republic of Congo where numerous alluvial and primary gold deposits are known to occur. The Kilo-Moto mines have produced over 10 million ounces of gold since 1904.

Initial gold exploration within the Bambari Permit focussed on the Passendro and French Camp areas, which were the sites of historic colonial period alluvial gold workings. The Passendro Main Zone and French Camp targets are still the most advanced exploration projects on the permit.

Soil geochemical surveys (conventional and termitaria) have been the primary screening tool in this large project area. As of June 2000, over 200 km^2 (or 10%) of the licence area has been covered at a reconnaissance scale (800m by 100m) with follow-up detailed geochemical surveys (400m by 100m and 200m by 100m) carried out on the Passendro, French Camp, Ndassima, and Ao Grid areas.

A total of 4 new gold target areas with multiple >50 ppb gold soil anomalies were discovered during the 2000 reconnaissance soil program within the Ao, Ndassima, French Camp Extension, N1, N2, and Louba areas.

Passendro and French Camp Prospects

Contoured soil geochemical data derived from the conventional and termitaria soil surveys over the Passendro Grid Main Zone and French Camp areas show four significant anomalous areas. The "Main Zone" is a 5.5 km long, 200 to 500m wide, NW trending soil anomaly that is confined to a zone of parallel trending saprolitised chlorite-sericite schist with intercalations of ferruginised schist and a zone of tourmaline-quartz veining. The saprolitised schist zone is bounded by two NW trending banded iron formation ridges. The French Camp anomaly is NW trending, 4 km long and occurs along the contact between iron formation and chlorite schist. The Main Zone South is NW trending, 2km long, subparallel to and 400m east of the Main Zone along an iron formation-chlorite schist contact. The French Camp East zone is NW trending, 1 km long, 400m east of the French Camp zone, along an iron formation-chlorite schist contact.

The Passendro Grid Area was the primary focus of exploration activities by both Asquith and AXMIN. Following the detailed conventional and termitaria soil surveys (200 x 50m grid); Asquith carried out the following exploration program on the Passendro Main Zone and French Camp target areas in 1998:

- Bedrock sampling program of the Passendro Grid; samples of note include 1140ppb Au over 13.0m; 479 ppb Au over 18.0m; 2470 ppb Au over 7.0m; 2134 ppb Au over 3.0m; and a grab sample 58.9 g/t Au in siliceous banded iron formation.
- Trenching program on the Passendro Main Zone target area consisting of 9 trenches totalling 382 metres. Of a total of 268 geochemical samples (saprolite and colluvium) collected and analysed for Au (includes 97 vertical samples), Trench 36N returned a gold value of 13.54 g/t Au over 1.0 metre. All trenches returned an average gold value of 111 ppb Au over a distance of 17 metres.
- A 60 hole, 832m percussion drill program conducted along three fences on the Passendro Main Zone target area to test a 1.4 km strike length of the 5.5 km termitaria soil anomaly. The fences were carried out on Asquith's Lines 2800N, 3500N and 4200N. Of the 60 holes drilled, two drill holes (98-NDR-33 on line 28+00N and 98-NDR-52 on line 35+00N) returned weighted Au assays of 1256 ppb Au over 15.0m and 1260 ppb Au over 15.0m respectively.

From July 1999 to June 2000, AXMIN carried out line cutting, detailed surface mapping, and a two-phase 144 hole reverse circulation ("RC") and 14 hole rotary air blast drilling program totalling 7,462m over the Passendro Main Zone (139 holes) and French Camp (19 holes) target areas. Over 71 RC holes returned anomalous gold values greater than or equal to 1.0 g/t Au.

The drilling tested a 1600m strike length of the 5500m long Main Zone anomaly to a maximum depth of 67 metres and there is apparent continuity of a number of gold zones along the drilled tested length. Additional in-fill drilling will be required to confirm the geological and grade continuity. Some typical auriferous downhole intervals in the Passendro Main Zone are:

Fence 10,000N - Hole PRC 087	3.68 g/t Au over 15.0m (from 12.0 – 27.0m)
Fence 10,400N - Hole PRC 140	27.10 g/t Au over 14.0m (from 26.0 – 40.0m)
Fence 10,640N - Hole PRC 042	4.30 g/t Au over 15.0m (15 – 30m)

At the French Camp Target area, a 480m strike length of the 4,000m long by 500m wide anomaly was tested to an average depth of 40m and continuity of a number of gold zones can be inferred (subject to confirmation by in-fill drilling) with intervals of note being:

Fence 140N - Hole PRC 146	3.47 g/t Au over 8.5m (from 52.0 – 60.5m)
Fence 300N - Hole PRC 143	4.99 g/t Au over 16.0m (from 15.0 – 31.0m)
Fence 460N - Hole PRC 147	1.67 g/t Au over 5.0m (25 – 30m)

During 2000 AXMIN carried out reconnaissance and follow-up soil geochemical surveys over approximately 200 km^2 of ground along strike from the Passendro gold project. The Louba, N1 and N2 grids are contiguous blocks northwest of Passendro, while the Ndassima and Ao grids are contiguous and to the southeast of Passendro. The following anomalous areas, which now warrant further work, have been identified:

Ao Grid

Three anomalies:
1) A >100 ppb Au anomaly, 5000m x 400m, NW trending, associated with a prominent banded iron formation ridge.
2) An 800m x 30m NNW trending >100 ppb Au anomaly at the SW corner of the grid associated with the tourmalinised contact between banded iron formation and a granitic intrusive. The anomaly remains open to the south.
3) A 3000 x 200m NNW trending anomaly >50 ppb gold at the eastern side of the grid with local discontinuities, lying at the contact of iron formation and schist.

Ndassima and French Camp Extension

Three anomalies:
1) NW corner of the grid (extension of the French Camp anomaly), the >50 ppb Au anomaly is approximately 1600m x 300m, associated with an iron formation-chlorite schist contact;
2) Central portion of the grid, a >50 ppb Au anomaly is approximately 4400m x 2500m in area with a number of internal zones, each 800 to 2500m in length with >100 ppb gold. The anomalies are associated with folded iron formation.
3) In southern part of the grid, 1000m long >50 ppb Au anomaly associated with iron formation.

Louba Grid

One anomaly:
1) 300m long x 400m wide >100 ppb Au soil anomaly possibly associated with a banded iron formation ridge. The soil anomaly remains open to the north.

Topa Iron Ore Discovery

The Topa iron ore occurrence, located in the northern part of the permit between the Louba and N2 Grid areas (at about UTM 452000E / 696000N), was discovered in 2000 by AXMIN during the reconnaissance soil sampling program.

In December 2000, AXMIN geologists mapped the hill mass at a scale of 1:5000 and three ground magnetometer profiles have been run through the centre of the deposit. Mapping lines were spaced at 400 metre intervals and three magnetometer profiles were spaced at 800 metre intervals. Mapping of outcrop and the distribution of "kangas" (massive iron formation fragments embedded in indurated laterite surfaces) suggest that there are at least two subparallel, E to ESE trending iron-rich units some 300-400 metres wide and up to 2,000 metres long. These two units may be the limbs of a tight fold, or a single faulted unit. The magnetic data and the topography support the interpretation of a tight synform with a fold closure along the eastern flank of Topa ridge.

Typically, the hematite-magnetite rock is a massive, metallic grey to gunmetal grey in colour, fine to medium grain unit. In-situ outcrop exposures of this unit contain distinct individual Fe-rich bands/beds whereby the metallic grey bands are thinner than the gunmetal bands and exhibit ductile deformation (i.e.; folding) due to either sediment slumping prior to consolidation or tectonic deformation.

A total of ten grab samples were collected by AXMIN from various areas within the Topa grid area for Fe analysis using the lithium metaborate fusion method. The average iron grade of the ten samples was 66.7 % (equivalent to 95.3 % Fe_20_3) with a range of 62.6 to 69.0%.

Subsequent to the above analytical results, all of the above mentioned sample material were re-analysed by XRF assay by a major mining company. The average % values are as follows:

Fe%	67.9%	K_2O	0.16%	MnO	0.02%	S	<0.01%
Fe_2O_3%	97.0%	P_2O_5	0.05%	SiO_2	0.99%	LOI	0.35%

Other than more detailed geological mapping, AXMIN has not planned to carry-out additional work on the Topa Iron discovery as they would like to joint venture the prospect area. Due to the extent of lateritic apron cover as well as the extent of structural deformation of the discovery area, Howe recommends that a detailed magnetometer survey and drill program be carried out on the Topa Iron discovery prior to seeking a joint venture partner as such a program would provide a preliminary estimate of the vertical and lateral extent and continuity of the Topa zone and enhance the value of the project in the eyes of a potential partner.

On the basis of Asquith and AXMIN's results from the exploration work to date on the property, it is Howe's opinion that the Bambari Permit with its Roandji gold project (Passendro Main Zone and French Camp areas) and Topa Iron discovery is an attractive project that warrants additional work. In this regard, AXMIN has recommended a staged Phase I program of geological mapping and follow-up reconnaissance and detailed rotary air blast and/or reverse circulation drilling over the strike extensions of the Passendro Main Zone and French Camp areas as well as on the Ndassima, Ao and Louba grid areas.

In Howe's opinion, target areas where gold resource potential is identified by reverse circulation and air blast drilling must be followed up with sufficient core drilling to confirm the geological structure and grade continuity of the zones. The combined core, reverse circulation, and air blast data can then be used for a resource estimate.

Pending positive results from the RAB and RC drilling, the overall Phase I program is expected to require four to six months to complete at a cost of C$ 1,082,000 including C$300,000 for diamond drilling on the Topa iron occurrence.

(2) Mali – Kofi, Netekoto, and Metadia Licences (also know as the Kofi Project) and the Satifara Licence.

The 259.8 km^2 Kofi Project Licence area and the 42.9 km^2 Satifara Licence are located in western Mali in a part of the Lower Proterozoic (Birimian) West African craton in an area known as the Kédougou – Kéniéba Inlier. The projects are located in western Mali in the same geological trend and environment as the Birimian-type, world class Sadiola mine (Anglogold/IAMGold, resource 106 million tonnes grading 2.4 grams gold/tonne, 2000 production 611,442 at a total cash operating cost of US$123/ounce), the Yatela mine (Anglogold/IAMGold, resource 13 million tonnes grading 3.7 grams gold/tonne), and other significant undeveloped gold deposits such as Loulo (Randgold, resource 31 million tonnes grading 3.7 grams gold/tonne) and Segala (Semafo, main zone resource, 9 million tonnes, 3.2 grams gold/tonne).

The Birimian sedimentary rock-hosted gold deposits are generally related to major, en-echelon regional fault structures, which have created structural settings where fracturing and brecciation, has provided dilatant zones for introduction of gold-bearing hydrothermal fluids.

The Sadiola and Yatela deposits are approximately 14 km east of the Satifara licence and 75 km north of the Kofi Project area. The Loulo deposit is approximately 10 km south of the Kofi Project and the NNE trending regional fault structures that host the Loulo deposit cross the Kofi project area. The Segala deposit is located about 1 km SE of the southeast corner of the Kofi Project licences.

Kofi Project

The most important structures in the Kofi project area can be observed on satellite images and on airborne geophysical data. Some of these structures were also identified in the field. Exploration has revealed that the Kofi area is intensively tectonized with at least two major NNE trending shear zones and several NW and NE fault systems cross the area.

A broad (6km wide) NNE trending zone of shearing bounds the Loulo-Yalea-Babota gold occurrences on the Randgold property to the southwest of the Kofi licence and passes through the northeast sector of the Kofi licence and continues across the Netekoto licence.

A series of NNW trending structures trend through the south and south-central sector of the Kofi licence on trend from Semafo's Segala gold occurrence immediately to the southeast of the Kofi licence.

A series of NW and E-W trending structures have also been identified on the airborne geophysics and satellite images. Based on the aeromagnetic data these trends may be younger faults that are locally intruded by mafic dykes. The NW fault trend appears to be the latest tectonic event.

During the 1998-99 (October to July) field season, based on prior reconnaissance soil geochemical surveys (Project Mali West and BHP Minerals) and analysis of satellite imagery and regional geophysical data, four areas (Yatia Licence, Kofi South, Kofi North-East, and Kofi South-West) were selected for soil geochemical follow-up on a 400 x 100 metre grid. During the 1999-2000 field season the 400m x 100m soil geochemical grid was expanded to cover the whole project area.

Seven areas (Kofi South-A, Kofi North-East-A, Kofi North-East-B, Kofi South-West-A, Kofi South-West-B, and Kofi South-West-C) were selected for infill follow-up geochemical sampling in 1999 on a 100 x 50 metre grid. Based on the second phase (1999) of regional soil grids , infill soil sampling was undertaken over seven areas designated Kofi North-West-A, Kofi South-East A, Kofi South-South-A, -B, –C, -D, and –E.

During the geochemical sampling programs, geological and geomorphologic mapping were completed. Due to the regional development of residual soils, there is very little outcrop, however, abundant fragments of material resistant to weathering can be observed and remnant geological structures may be locally observed. Given the characteristic siliceous nature of some gold mineralisation in the region, gold bearing material is often one of the less weathered materials commonly available for observation in the residual soils. Such material was routinely sampled and assayed by AXMIN as part of their geological mapping program.

Drill programs were undertaken in June-July 1999 and April-July 2000. The 1999 program comprised 68 reverse circulation and 17 reverse air blast holes, which were completed by two contractors for a total of 4,776 metres. The 2000 program comprised 101 reverse circulation holes for a total of 6,586.5 metres.

The 1999 program was designed to test the gold soil anomalies (+100 ppb threshold) identified during the 1998-99 sampling programs. Anomalies partially drill tested were located in the Kofi South-A and Kofi South-West-B areas.

During the 2000 program, drilling continued in the Kofi South-West-A, and -B areas and was initiated in the Kofi South-West-C and Kofi South-South-A area.

Both drill programs suffered from significant technical (drilling contractor problems such as insufficient rods and casing, and major mechanical breakdowns) and weather problems that resulted in premature termination of the programs. Neither of the two drill programs fully completed their objectives and more drilling is definitely warranted on the project.

The gold mineralisation identified in the Kofi licence relates to three different geological settings:

- Contact between quartz-tourmaline sandstones and quartzite – the gold mineralisation develops in quartz stockworks on NNE or NNW openings, occurring on or near the contact between the two formations along NNW or NNE shears. This is found in Kofi Southwest zones A, B and C.
- NNE shear zone / fold nose along the contact between greywackes/phyllite and black quartzite. The gold mineralisation develops in quartz-sulphide stockworks along the shear and in the fold hinge. This type of mineralisation was identified in the Kofi South prospect.
- Quartz veins around a post-tectonic granite – typical for Kofi South-South prospect.

There are at least 30 untested to partially tested gold geochemical anomalies in the project area. In Howe's opinion, only a few of the geochemical anomalies have been definitively tested and written off.

The drilling program has for the most part been of a reconnaissance nature on fences typically 400 metres apart, across only seven of the identified anomalies. The drilling has provided significant gold intersections over 1 and up to 9.7 grams gold per tonne. Auriferous intervals of note are:

Kofi Anomaly Southwest A	
Fence 1460925N - Hole KWAC 1	2.08 g/t Au over 10m
Fence 1460925N - Hole KWAC 1B	1.26 g/t Au over 10m
Kofi Anomaly Southwest B	
Fence 1456800N - Hole KWBC 12	3.06 g/t Au over 30m
Fence 1456800N - Hole KWBB 5	1.76 g/t Au over 46m
Fence 1456800N - Hole KWBC 11	2.27 g/t Au over 25m
Kofi Anomaly Southwest C	
Fence 1457100N - Hole KWCC 6	3.46 g/t Au over 13m
Fence 1457100N - Hole KWCC 13	2.56 g/t Au over 10m
Fence 1457100N - Hole KWCC 7	5.87 g/t Au over 5m
Kofi Anomaly South A	
Fence 1455100N - Hole KSC 17	2.20 g/t Au over 10m
Fence 1454100N - Hole KSC 59	9.70 g/t Au over 5m
Fence 1454100N - Hole KSC 58	4.50 g/t Au over 5m
Kofi Anomaly South-South A	
Fence 1443300N - Hole KSSC 26	1.97 g/t Au over 5m
Fence 1443000N - Hole KSSC 29	2.63 g/t Au over 15m

Six geochemically anomalous areas have been recommended by the AXMIN technical staff for follow-up in the next drilling season. All are on the Kofi licence. These areas either have returned significant gold intersections (1 to 9.7 grams gold per tonne) from the previous drill programs, or are undrilled and are located in areas where regional fault structures coincided with indications of the presence of fracturing, brecciation, silicification and quartz-veining in the Birimian quartzite and greywacke. Howe concurs with the recommended exploration program.

The recommended budget is C$ 1,271,000.

Satifara Project

In 1997, African Goldfields carried out a program of soil sampling, geological mapping and trenching that outlined an anomalous area (+100 ppb threshold) 5km long and 1.5km wide in its northern part and 0.25 km wide in its southern part. The original soil sampling started with an initial grid of 400m x 100m. The anomalous areas were in-filled at 50m by analysing the already collected samples. Over the anomalous areas infill on a 200 x 50m grid was completed. A trenching program was completed with one trench returning 3.4 grams gold per tonne over 34 metres.

In June 2000 AXMIN completed a geological mapping program in the area and concluded that there were errors in the grid co-ordinates on the two sets of grids established by African Goldfields. This probably caused some of the trenches established by African Goldfields to be mislocated relative to the geochemical anomaly.

The AXMIN field program was terminated by weather. The AXMIN geologist has concluded that the Satifara licence still has an interesting potential and has recommended additional soil geochemical surveys (5 km^2 on a 100m x 50m grid) to relocate the anomaly. Geological mapping would be completed over the new grid. A program of reverse circulation drilling is recommended to test the anomaly. Howe concurs with the recommended work.

The estimated cost of the program is C$ 89,000.

(3) Ghana - Cape Three Points Licence

The 75.2 km^2 Cape Three Points Licence area is located in the West African craton at the south end of the Ashanti greenstone belt. The Ashanti belt is comprised of lower Proterozoic volcanic and sedimentary rocks of Birimian age.

The historic (pre-colonial) gold production and the majority of colonial to present gold production (55 million ounces) in Ghana has been from the Birimian aged Ashanti greenstone belt and adjacent Birimian metasedimentary terrain. The Ashanti greenstone belt is also historically the largest gold producing area in the West African Craton. Ghana currently produces approximately 2.6 million ounces of gold per year.

The Cape Three Points Licence area has numerous historic native gold workings and a number of gold occurrences that have seen modest production during early colonial times (before World War II).

The project area was covered by Anmercosa in 1999 with regional soil geochemical surveys (300m x 50m grid) with local follow-up on detailed grids in the Morrison Hill area in the northeast sector of the licence.

The gold mineralisation known in the licence area is poorly exposed but for the most part appears to occur as narrow high-grade quartz vein and siliceous alteration zones within fault zones.

AXMIN's short-term goal in the project area is to assess the potential to establish a small-scale high grade operation that could provide cash flow to the company. The primary focus is the Satin Mine area where historic gold occurrences consist of numerous native pits. By 1937 a three-compartment shaft was sunk to 185 feet and levels were developed at 80 feet (adit level), 130 feet, and 180 feet. A winze was sunk from the adit to the 180 ft level and a drift cut at 110 feet. Lateral workings totalled 1,600 feet.

The quartz vein follows a major shear (calcite-chlorite schists) in mafic volcanic rocks. The vein pinches and swells both along strike (north-south) and vertically down-dip. No record of reserves are available. The mine closed in 1948. An indication of the grade in the underground workings is provided by detailed sampling of the vein along a strike length of 66 metres. The average grade is 28.3 g/t Au over an average width of 0.7 metres. The width of the vein ranges from 0.1 to 1.6 metres and the grade ranges from nil to 216 g/t tonne over the width of the vein. No assay data is available for the wallrocks on either side of the vein.

AXMIN completed two small reverse circulation drill programs at the Satin Mine in October 2000 and in March-April 2001. The drill results indicate potential for narrow, high grade mineralisation along a strike length of 180 metres and to a depth of approximately 85 metres with the zone open at depth below the area tested. Eight holes penetrated the plane of the vein structure along this 180 metre strike length and returned assays ranging from 0.72 to 68.9 g/t Au over widths of 1 to 4 metres. The weighted average grade of the 8 drill hole intersections is 25.5 g/t Au over an average width of 1.6 metres.

Additional drilling will be required before a valid resource estimate can be made. Given the high cost of small scale underground mining, Howe is of the opinion that the resource potential of the zone would have to be extended along strike or at depth to justify an underground operation.

It is possible that a small open pit operation could be economic but additional close-spaced drilling will be required to evaluate this potential.

AXMIN also carried out limited reverse circulation drilling in the vicinity of the old Sefwi and Ainbak gold occurrences in the south part of the area. No significant gold mineralisation was indicated by the assays.

A drilling program totalling C$660,000 has been proposed to continue the evaluation of untested gold in soil geochemical targets in the project area and to complete drilling in the Satin Mine area. Howe concurs with the proposed program and budget.

(4) Senegal – Sonkounkou Licence

The 341 km^2 Sonkounkou Licence area has recently been acquired by AXMIN. The licence is located in the northeast part of the country on the border with Mali and in the same geological trend as the Kofi and Satifara Projects in Mali.

Airborne magnetic and radiometric surveys in conjunction with analysis of satellite imagery were completed by the prior owner of the property in 1998. Government geological mapping and historical regional soil geochemical data indicate that the project has a similar lithological and structural setting as the Companies other projects in Mali, with shear-hosted gold mineralisation in Birimian volcanic lithologies.

A program of definitive soil geochemical sampling is warranted for the project area to define drill targets. The proposed budget is C$ 300,000.

(5) Tanzania – Siga 257/94 and 975/98 Licences (also known as the Siga Hills Project)

The 105.8 km^2 Siga Hills Project area is located in the north-central part of the country in an area underlain by a number of Archean greenstone belt areas that have had numerous recent gold discoveries.

The project area has been covered with regional soil geochemical surveys with one main gold geochemical target (+20 ppb threshold with peak values to 175 ppb) outlined along a strike length of 2,500 metres. The main geochemical anomaly is underlain by mafic and felsic volcanic rocks and magnetite-hematite-chert banded iron formation.

Reconnaissance reverse circulation drilling by AXMIN completed in April 2001 did not return any significant gold assays, however, a shear zone with up to 15% pyrite and some silicification within intermediate to mafic volcanic rocks was encountered in a number of the holes on the flank of the main gold geochemical anomaly and additional drilling has been recommended by AXMIN. Howe concurs with this recommendation.

A budget of C$ 112,000 has been allocated for the follow-up drill program.

1.0 INTRODUCTION AND TERMS OF REFERENCE

1.1 INTRODUCTION

At the request of Mr. Michael Coulter, President of Asquith Resources Inc. ("Asquith"), Toronto, Ontario, Canada, A. C. A. Howe International Limited ("Howe") has prepared a geological report (the "Report") specific to the standards dictated by National Instrument 43-101, in respect of the mineral exploration properties of Asquith and AXMIN Limited ("AXMIN") located in Central African Republic, Mali, Tanzania, Ghana, and Senegal. It is Howe's understanding that this report will be used by Asquith and AXMIN in a prospectus for financing purposes upon the merger of the two companies.

Asquith is a public company trading on the CDNX, incorporated in Ontario, with corporate offices located at Suite 600, 15 Toronto Street, Toronto, Ontario, Canada, M5C 2E3.

Howe is an international geological and mining consulting firm, which was incorporated in the Province of Ontario in 1966 and has continuously operated under a "Certificate of Authorization" to practice as Professional Engineers (Ontario) since 1970. Howe provides a wide range of geological and mining consulting services to the international mining industry, including geological, evaluation and valuation reports on mineral properties. The firm's services are provided through offices in Toronto, Canada, Denver, USA, London U.K. and Santiago, Chile. Howe is not an insider, associate or affiliate of Asquith or AXMIN.

Neither Howe nor any of the authors of this Report (nor family members or associates) have a business relationship with Asquith or AXMIN or any associated company, nor with any company mentioned in the Report which is likely to materially influence their impartiality or create the perception that the credibility of the Report could be compromised or biased in any way. The views expressed herein are genuinely held and deemed independent of Asquith and AXMIN.

Moreover, neither authors of the Report nor Howe (nor their family members nor associates) have any financial interest in the outcome of any transaction involving the properties considered in this Report, other than the payment of normal professional fees for the work undertaken in their preparation (which are based upon hourly charge-out rates and reimbursement of expenses). The payment of such fees is not dependent upon the content or conclusions of either this Report, or any consequences of any proposed transaction.

The geological report for the properties was prepared principally by Mr. Dino Titaro, M.Sc., P.Geo., President and CEO of Howe. and Mr. Daniel C. Leroux, B.Sc., P.Geo., associate consulting geologist with Howe. Mr. Titaro has over 20 years experience in the mining industry including extensive experience in the gold sector in Canada. Mr. Leroux has over nine years experience including a background in international mineral exploration and evaluation studies. Mr. Leroux has had direct experience with managing exploration projects for Africa.

Asquith has accepted that the qualifications, expertise, experience, competence and professional reputation of Howe's Principals and Associate Geologists are appropriate and relevant for the preparation of this Report. Asquith has also accepted that Howe's Principals are members of professional bodies that are appropriate and relevant for the preparation of this Report.

1.2 SOURCES OF INFORMATION AND DISCLAIMER

In preparing this Report, Howe reviewed geological reports and maps, miscellaneous technical papers, company letters and memoranda, and other public and private information as listed in the "Sources of Information" section at the conclusion of this report. Howe has assumed that all of the information and technical documents reviewed and listed in the "Sources of Information" are accurate and complete in all material aspects. While Howe carefully reviewed all of this information, Howe has not conducted an independent investigation to verify its accuracy and completeness. Howe has only reviewed the land tenure in a preliminary fashion, and has not independently verified the legal status or ownership of the Property or the underlying agreements.

Site visits were carried out to mining properties in Central African Republic, Mali, and Ghana. The properties in Tanzania and Senegal were not visited as they are in very early stages of exploration and there was insufficient technical data that could have been validated by such a site visit. The results of the site visits are documented in the following sections of this Report.

In addition, Howe carried out discussions with the local management and technical personnel of Asquith and AXMIN. Howe's extensive experience in Precambrian lode gold deposits in Canada and Africa, and prior investigations of other gold deposits throughout the world, was also drawn upon.

Asquith and AXMIN have warranted that a full disclosure of all material information in their possession or control has been made to Howe, and that it is complete, accurate, true and not misleading. Asquith and AXMIN have provided Howe with an indemnity in relation to information provided by them, since Howe has relied on Asquith and AXMIN's information when preparing its Report. Asquith and AXMIN have agreed that neither they nor their associates will make any claim against Howe to recover any loss or damage suffered as a result of Howe's reliance upon that information in the preparation of its Report. Asquith and AXMIN have also indemnified Howe against any claim arising out of the assignment to prepare this Report, except where the claim arises as a result of any proved wilful misconduct or negligence on the part of Howe. This indemnity is also applied to any consequential extension of work through queries, questions, public hearings or additional work required arising out of the engagement.

Draft copies of the Report have been reviewed for factual errors by Asquith and AXMIN. Any changes made as a result of these reviews did not involve any alteration to the conclusions made. Hence, the statement and opinions expressed in this document are given in good faith and in the belief that such statements and opinions are not false and misleading at the date of this Report.

Howe's opinion is provided solely for the purpose outlined in Section 1.1. Neither the whole nor any part of this Report, nor any references thereto, may be included in or with, or attached to, any document, circular, resolution, letter or statement to be published or distributed externally to

Asquith, AXMIN and their associates without the prior written consent of Howe to the form and context in which it is to be so published or distributed. Such consent will not be unreasonably withheld or delayed, however, the decision whether or not to charge a fee for such consent will be at Howe's sole discretion.

Howe reserves the right, but will not be obligated to revise this Report and conclusions if additional information becomes known to Howe subsequent to the date of this report.

1.3 UNITS AND CURRENCY

All units of measurement used in this Report are metric unless otherwise stated. Historical grade and tonnage figures are reported as originally published. Gold values are reported in ounces per short ton ("oz/T Au") or grams per metric tonne ("g/t Au"). Other metal values are reported in percent, such as percent iron ("% Fe"), etc.

The Canadian dollar is used throughout this Report unless otherwise stated. The exchange rate to US$ equivalent used in this report is US$1.00=Canadian$1.56.

2.0 PROPERTY DESCRIPTIONS AND LOCATIONS

AXMIN's staged exploration approach in Africa has involved definition on a regional scale of areas of favourable geological environments for known gold deposit types, followed by regional analysis of satellite imagery and regional geophysical data for area selection.

This process led AXMIN to enter into a joint venture with Asquith on the Bambari licence in the Central African Republic. The Bambari licence is the only property in which Asquith holds an interest.

Land acquisition has been completed by direction acquisition of exploration licences on behalf of AXMIN or a wholly owned AXMIN subsidiary (in countries that require land to be held through a locally incorporated entity), or by joint venture or farm-in agreements with other land holders.

Howe has reviewed information on land tenure provided by Asquith and AXMIN and has found no obvious errors or omissions, however, Howe has not independently verified the legal status or ownership of the Property or the underlying agreements. Asquith and AXMIN have reviewed this section of the Report and have indicated to Howe that it correctly reflects their interests in the various properties.

Figure 2.1 provides a general location map for all of the properties held by Asquith and AXMIN in Africa. Detailed location maps are provided in the sections of the report dealing with each specific property.

2.1 PROPERTY DESCRIPTION AND LOCATION, CENTRAL AFRICAN REPUBLIC

The Central African Republic ("CAR"), with an area of approximately 623,000 km^2, is a landlocked country in the heart of the African continent. The CAR is bordered on the north by Chad, on the east by Sudan, on the south by the Democratic Republic of Congo ("DRC") and the Congo Republic and on the west by Cameroon. Bangui is the capital and international point of entry into the country. Other major urban centres in the CAR are Berbérati, Bouar, Bossangoa, Bambari, Bria, Bakouma and Ndélé.

French is the official language. The local currency is the CFA-franc, which is guaranteed by the French government. The exchange rate in April 2001 was 1US$ = 745 CFA-francs.

Any foreign exchange and international capital movements must be made through the various "chartered" banks in the CAR. Permission is required from the Minister of Finance to repatriate funds out of the CAR.

The CAR has no rail system but routine access to most parts of the country is provided by a 22,000 km network of roads. This road network runs to all major urban centres of the country and toward its borders with Cameroon and Chad. Of the 22,000 km of road that exists in the CAR, approximately 458 km is paved (around the Bangui area), 11,000 km of road is classified as improved earth (lateritic) and another 11,000km classified as unimproved earth (lateritic) roads. For the most part, the earth roads are in poor condition and are closed for periods of up to 24 hours during the rainy season (July to October). The only road access to the Democratic Republic of the Congo is by vehicle ferry that crosses the Oubangui River from Bangui to Zongo. Bangui is also connected by a series of paved and lateritic roads to the port city of Douala in Cameroon where most goods are shipped from Europe and trucked to the CAR via lorry trucks.

Access to the major urban centres of the CAR is also possible via fixed wing charter air flights, however, there is no charter helicopter service in the country. Bangui is accessible via international flights operated by Air France and Air Afrique from Paris or other African cities.

Electricity for the capital is primarily supplied by ENERCA's Boali hydroelectric dam whereas electrical power for the remaining urban centres (e.g. Bambari) is generated by small power stations. The smaller towns and villages have no electricity and depend on privately owned generators for their power.

Supplies such as fuel, food stuffs and timber is generally obtained in Bangui but smaller centres such as Bambari and Bria in the eastern part of the country do carry such supplies but of limited quantity.

The CAR government is a republic modeled under the French system of government. The President is democratically elected by popular vote to a six-year term and the prime minister is appointed by the President. The National Assembly is the legislative branch of the government by which members are elected by popular vote to serve five-year terms. The country is subdivided into 14 préfectures or administrative regions, two economic préfectures and one commune. The legal system of the CAR is based on French law.

In 1996, the country experienced three mutinies by dissident elements of the armed forces, which demanded payment of delinquent salaries as well as political and military reforms. Subsequent violence between the government and rebel military groups led to the destruction of businesses in the capital. A subsequent reduction in tax revenues worsened the government's attempts to meet expenses. African peacekeepers were sent into the country in 1997 to restore order and in 1998, the UN mission in the CAR ("MINURCA") assumed the responsibility for peacekeeping operations. Democratically held presidential and legislative elections were conducted in 1999. The incumbent, Mr. Ange-Félix Patassé was re-elected as the President of the Republic and since the elections, the political situation in the country has been stable and has been very peaceful in comparison to its neighbouring countries.

2.1.1 Property Description

The Bambari licence (also known as the Roandji project) is held 100% by Aurafrique S.A.R.L., a Central African Republic private company. Aurafrique was established in 1996 and is owned and controlled by Asquith and AXMIN.

Aurafrique holds two licences covering the Bambari permit, an *Autorisation Personnelle Miniere* issued March 23, 1998 for a period of 5 years and a *Permis de Recherche Type A*, as amended, issued July 24, 1998 for a period of 5 years.

Pursuant to an agreement dated June 1, 1999, AXMIN has earned a 51% interest in Aurafrique by expending approximately US$ 1,350,000. AXMIN may increase its interest to 60% in Aurafrique by expenditure of an additional US$500,000 commencing September 1, 2000. Thereafter, expenditures are to be shared pro rata by Asquith and AXMIN, or alternatively, Asquith may elect to dilute and give AXMIN the right to earn a 75% interest in Aurafrique by AXMIN carrying Asquith through to a bankable feasibility study.

Based on the survey co-ordinates for the project area, Howe has calculated that the concession covers an area of 2,058 km^2 with 1,877 km^2 underlain by the prospective Archean greenstone belt rocks.

Licence	**Date Awarded**	**Renewal Date**	**Current Area Hectares**	**AXMIN/Asquith Interest**
Bambari	July 24, 1998	July 2003	205,821	100 %

2.1.2 Property Location and Access

The Bambari Licence is located near the centre of the CAR and is approximately 320 km ENE of Bangui and approximately 50 km N of the town of Bambari. The property area lies within the Préfecture of Ouaka and straddles three departments, the Sous-Préfectures de Bambari, Bakala and Ippy.

The co-ordinates of the Bambari permit are as follows:

Point	Latitude (N)	Longitude (E)
A	6° 26’ 00’’	20° 18’ 00’’
B	6° 26’ 00’’	20° 30’ 00’’
C	6° 04’ 00’’	21° 00’ 00’’
D	5° 50’ 00’’	21° 00’ 00’’
E	5° 50’ 00’’	20° 50’ 00’’

The project area is readily accessible by road from Bangui via Route Nationale 2 (R.N. 2) or by charter aircraft from Bangui to Bambari. Route Nationale 2 is paved for 160 km from Bangui to the town of Sibut then from Sibut to Bambari (approx. 200 km). R.N. 2 is a hard packed lateritic road. From Bambari, access to the southern portion of the permit area can be achieved via a secondary dirt road to Djoubissi (approx. 60 km) whereby crossing the Baidou river is necessary and is completed by barge. The Baidou river barge has a capacity of transporting two 4x4 vehicles or one 7 tonne truck. The southern access road connects Bambari with the villages of Balingba, Gralindji, Ndassima and Djoubissi.

Access to the eastern portion of the property is also possible via R.N. 5, which links Bambari to the towns of Ippy and Bria. Traveling west from Ippy on Route Régionale 12 (R.R. 12) to Djoubissi a distance of 50 km is possible year-round. Access to the northern portion of the property is limited to a secondary road that parallels a section of the Ouaka River, which flows southwesterly through the property area.

Within the active target areas, access is limited to bush roads, drill roads and / or foot trails.

In order to avoid erosional damage of lateritic roads during the rainy season (July – October), the Ministry of Transport has regulated that all vehicular travel on all lateritic roads, inclusive of lateritic highways, is forbidden within the first 6 hours after any major rainfall.

2.1.3 Climate, Infrastructure, Physiography

2.1.3.1 Physiography, Climate, Vegetation and Current Land Use

The topography of the Roandji Property area is generally flat with numerous small to high rolling hills ranging in height from 500m to 700m a.s.l. Between many of the hills, truncated laterite areas have been developed by erosion, transport, cementation and tropical weathering of the surrounding rocks.

The permit occurs within parts of the Ouaka and Baidou river watersheds. The developed drainage pattern within and outside of the permit area is dendritic with numerous first and second order streams occurring within separate interfluves. Two rainy seasons occur in the CAR whereby the first is from July to October and a second in February. Maximum summer daytime temperatures range between 35°C and 40°C, with winter daytime temperatures varying from 15°C and 25°C. Vegetation found on the Roandji Property area is classified as savannah forest (small trees, brush and grasses) whereas along riverbanks, denser bush with the occasional larger trees including some tropical hardwoods are found. Current land use by the local population consists primarily of subsistence farming (e.g., manioc, peanuts, sesame, cotton, etc.). A limited amount of orpaillage workings occur along and within the river courses however, the amounts of gold produced are minimal.

2.1.3.2 Infrastructure and Local Resources

The CAR is one of the most underdeveloped countries in Africa. Due to its underdeveloped nature, the CAR economy is predominantly based on subsistence agriculture. The basic food crops include manioc (or cassava), millet, sorghum, corn, rice, peanuts and sweet potatoes. The country's principal sources of revenue are diamonds, timber exports, coffee, tobacco and cotton. Diamonds and timber account for 70% of export earnings. According to Harris (1998), the mining sector has generally contributed about 4% of the country's gross domestic product. The growth of the CAR's export industry is hindered by the difficulty of transporting goods to a seaport.

The Bambari Permit area is located in a historical alluvial gold mining area. Exploration supplies, fuel, equipment and services and an unskilled workforce are available in the district. The nearby town of Bambari is serviced by a gravel landing strip and a municipal hospital.

Prior to Asquith's involvement in the Roandji Property, all of the surrounding villages had no modern infrastructure (i.e., electricity, plumbing, communications, etc.). Asquith has constructed and currently operates a base camp facility located 2 km north of Ndassima and is situated along the west bank of the Ngou-Mbourou river. The base camp consists of the following buildings:

- One 2 room air conditioned office;
- One kitchen and dining room building;
- One bunk house complex that can accommodate 11 persons;
- Three Weatherhaven-type tents;
- One bunk house for support staff and security;
- A sanitary and laundry building;
- A garage facility;
- A sample processing area, and;
- A sample and equipment storage facility.

Electricity to all buildings in the base camp is provided by a 50KvA 220V Koehler generator with a 7KvA 220V Lister back-up generator. All fuel (diesel and gasoline) is trucked-in to the base camp from Bangui and stored in two fuel tanks with a capacity of 6,000 litres. Utility water is pumped from the Ngou-Mbourou River into a 2,000-litre water tower. The utility water is then treated prior to distribution to the sanitary and kitchen facilities. Bottled water is used for drinking and can be readily purchased in large supplies in Bambari and / or Bangui.

Asquith/AXMIN's transportation fleet includes two heavy-duty four wheel drive Toyota Landcruiser pick-ups and one Mitsubishi L200 4x4 double-cab –pick up truck.

2.1.4 Mining Laws in the Central African Republic

The mining law of Central African Republic is currently being revised but the revisions have not yet been enacted, however, adoption of the new Mining Code is expected to take place during 2001.

The existing Mining Code (1970's version) allows for three main mineral rights permits. They are:

Personal licence (Permis d'Autorisation Personnelle):

- granted for a five year period and is renewable for one or more additional five year periods;
- surface area is limited to a maximum 2,000 km^2;
- holder must not undertake any type of drilling, excavation or underground work unless the holder obtains permits to do so, and;
- quarterly reports and one annual summary report must be submitted to the Mines Minister

and the Direction Générale des Ressources Minérales (“DGRM”).

Exploration Permits (Permis de recherche):

- two classes of permits: Type A and B whereby Type A permits can be granted for an area of any shape or size whereas Type B permits cannot exceed 100 km^2 (sides cannot measure > 10 km in length);
- permit is initially granted for five years and is renewable for one or more 1 year periods;
- upon renewal, the Ministry may impose that the permit be reduced in size;
- excavation and drilling can be undertaken, and;
- monthly reports and one annual summary report must be submitted to the Mines Minister and the Direction Générale des Ressources Minérales (“DGRM”).

Mining Permit (Permit d’exploitation):

- Only holders of a permis de recherche are entitled to obtain a permis d’exploitation on the same property if satisfactory evidence on the existence of a commercially exploitable mineral deposit(s) is provided to the government (i.e.; feasibility study);
- permit is granted for four years and may be renewable for no more than four four-year terms as long as mining activity and all fees and royalties have been paid, and;
- an exploitation permit may be transferred or leased on an undivided basis with the approval of the relevant authorities;
- quarterly reports and one annual summary report must be submitted to the Mines Minister and the Direction Générale des Ressources Minérales (“DGRM”).

All permits are subject to initial permit fees, land taxes and royalties.

Presently, under the auspices and funding of the World Bank, the CAR’s Mining Code is being revised to replace the circa 1970's Mining Code. The new legislation will encourage competitive minerals development, and is intended to attract foreign investors to help develop the country’s minerals industry. It is anticipated that the new Mining Code will be law by mid 2001. Proposed changes / amendments to the Mining Code are:

Personal licence (Permis d’Autorisation Personnelle):

- the elimination of the Permis d’Autorisation Personnelle to be replaced by a Permis de Reconnaissance whereby the maximum surface area applicable is 10,000 km^2 (in the form of a rectangle or polygon) with two 1 year terms;

Exploration Permit (Permis de Recherche)

- all permit applications will be approved by the Minister of Mines as opposed to the current Code where granting of mineral permits is done by the President of the CAR;
- surface areas for Permis de Recherche permits will be granted up to a maximum 1,000 km^2 for an initial 3 year period. After the renewal application has been submitted to the Ministry, the Minister of Mines can renew the permit for four additional 2 year periods if the title holder has 1) respected the conditions set forth in the permit during the previous period, 2) paid all fees as required by decree and 3) submission of an exploration / work program for the renewal period;

- subsequent permit renewals will require that the title holder reduce the areal extent of the Permis de Recherche by 50%. Once a Permis de Recherche has been reduced to 62 km^2 (remaining surface area after the fourth renewal) no further surface reductions are required by the title holder;
- annual minimum exploration expenses for Permis de Recherche permits is determined by decree whereby all exploration proposals are subject to approval by the Ministry of Mines;
- a chapter pertaining to the environment has been included in the newly proposed Mining Code.

Mining Permit

- The duration of the Mining Permit is granted based on the proposed life of the mine defined by a feasibility study however, the permit may not extend to over 25 years;
- If the title holder conforms to all required conditions as previously defined by decree, then the Minister must renew the permit for one or more 10 year periods;
- Areal extent of the Mining Permit is dependent based on the limits of the deposit defined in the feasibility study;
- All periodic reports (submittal dates fixed by decree) must be sent to the Directeur des Ressources Minerals chargé des Mines.

Currently all mining companies interested in doing business in the CAR must form a CAR company, whether it is registered as an S.A.R.L. or S.A. The CAR company must have a minimum capitalization of 50,000,000FCFA (or approximately US$100,000) in the treasury. It is also recommended that the CAR company apply for all exploration permits. According to the CAR's investment code, at the time of incorporation CAR companies can only hold a maximum 80% equity interest in an exploration permit and the remaining 20% must be held by Central African nationals in accordance with the requirements of CAR law.

As an incentive to investment in the CAR, foreign companies are eligible for certain privileges such as income tax relief (corporate tax, VAT, etc.) and reduced import duties on new and/or used equipment and spare parts. Corporate taxes range from 30% to 45%. All gold production in the CAR is subject to export taxes before export. To export gold from the CAR, exportation documents must also be obtained from the Ministry of Commerce and Industry and from Customs.

2.1.4.2 Gold Valuation and Export Procedures in the CAR

All gold produced in the CAR, whether it is derived from artisanal or industrialized operations, must be independently valued by the CAR government before they can be exported out of the country. All gold production is brought to the Bureau d'Évaluation et de Contrôle de Diamants et Or ("BECDOR") in Bangui prior to exportation. According to Bernier (1999), tax rates pertaining to the exportation of gold and diamonds, originally set in Article 26 of the law of finance no. 97.009, were recently modified in law of finance No. 98.001 (see Appendix with decree). The exportation of gold is subject to a cumulative tax of 3.75% of the value set by BECDOR. The cumulative tax for gold is broken down as follows: 2% export tax (Droit de sortie), a 1% minimum tax (Impôt Minimum Forfaitaire) and a 0.75% special tax (Fonds de Promotion Minière) for the promotion of mining in the CAR. The previous cumulative tax for gold in 1997 was 3%.

2.1.4.3 Export Procedures for Exploration Samples

All exploration samples derived from soil, rock, trenching and drilling (RC and core) are subject to inspection by the Ministry of Mines. The inspection process is as follows:

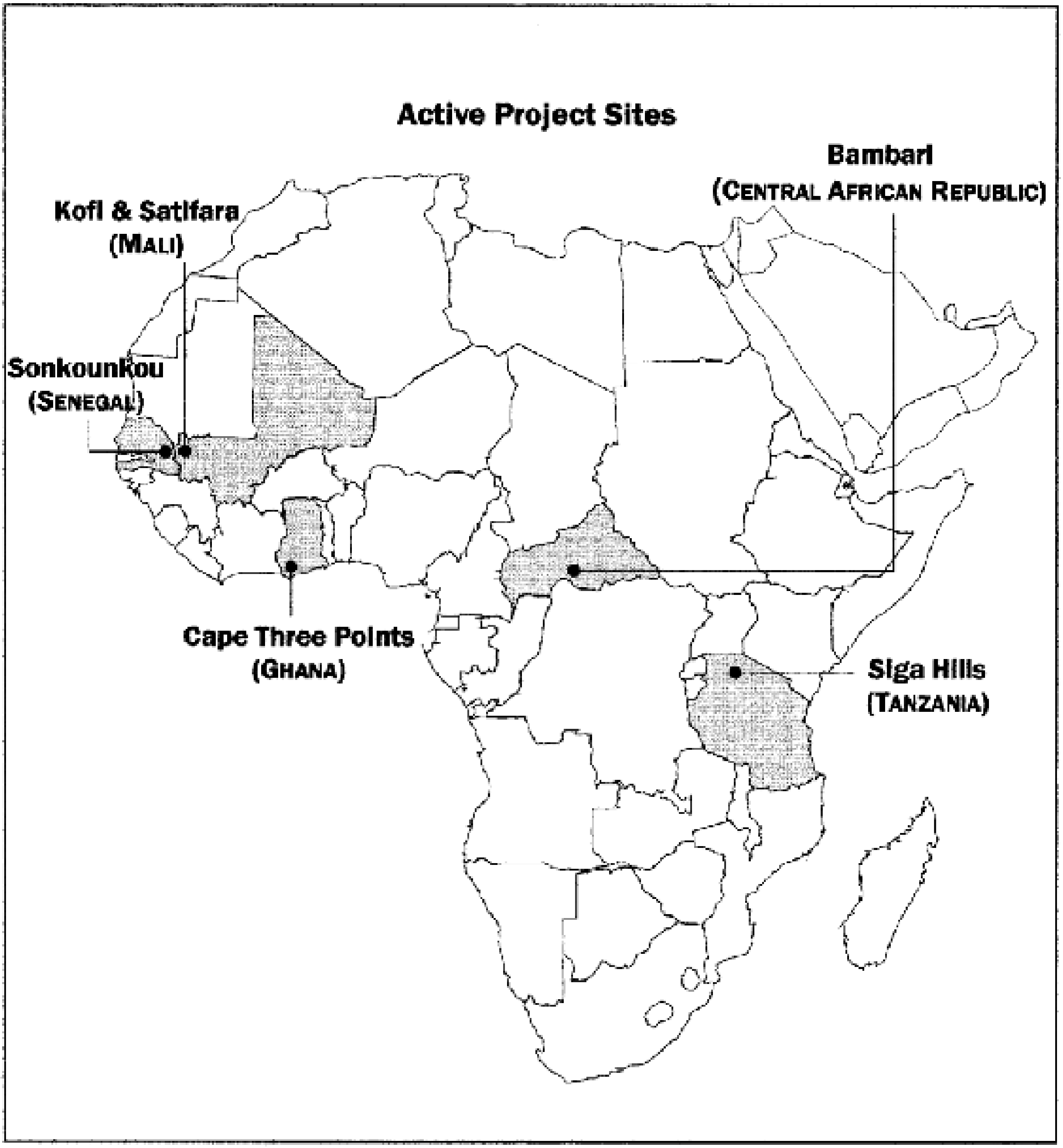
- All sample material is weighed and the cumulative weight is registered;
- The inspector (Chef de Service) lists all sample numbers (or intervals) to be exported;
- The inspector will view selected samples in order to verify that other constituents are not placed into the sample bags (smuggling).

Following the inspection process, three forms are then prepared by the Chef de Service for signature by the Directeur Général:

- *Fiche d'Expertise d'Echantillon de Roche (signed by the Directeur Général);*
- *Fiche d'Expertise d'Echantillon (signed by the Directeur Général) and;*
- *Frais de Vacation.*

Fees for these are calculated as follows:

- 2,500FCFA + (total weight of samples for export x 500) = Total
- Frais de Vacation (10,000 FCFA)



A.C.A. HOWE INTERNATIONAL LIMITED

FIGURE 2-1

2.2 PROPERTY DESCRIPTION AND LOCATION – TANZANIA

The following general information is taken from Mbendi (2001) and the U.S. Central Intelligence Agency (2001).

Tanzania is an independent republic (formed by the merger of the British colony of Tanganyika and Zanzibar) with an area of 945,100 km^2. The country lies on the Indian Ocean coast and forms part of the East African region between Kenya and Mozambique. The capital city is Dar es Salaam. Other major cities are Arusha, Dodoma, and Mwanza.

Swahili is the official language but English is widely spoken. The local currency is the Tanzania shilling. The exchange rate in April 2001 was 1US$ = 872 Tsh.

International airports at Dar es Salaam and Kilimanjaro are serviced by thirteen international airlines. Air Tanzania operates a regional service to 18 towns in the country. There is a good network of roads throughout the country as well as a rail network from the coast to the main mining areas.

Mining is a key and growing industry has attracted significant foreign investment in recent years.

Foreign travelers to the country need to be very aware of vaccination requirements, lack of availability of prescription medicines, and the need for advanced payment for any medical services required regardless of insurance coverage.

2.2.1 Property Description

Pursuant to an agreement dated October 21, 1999, AXMIN has the right to earn a 50 % interest in Ormonde Mining (Tanzania) Limited's interest in two contiguous licences in the Siga Hills area of Tanzania. AXMIN must expend US$350,000 on each of the licences over a three-year period in order to earn its interest.

Licence	Date Awarded	Renewal Date	Current Area Hectares	AXMIN Earned Interest
PL257/94	2001	2007	7,750	0%
PL974/98	1998	2005	2,830	0%

2.2.2 Property Location and Access

The licences are situated at the northern end of the Siga-Mabale Hills, to the south and east of the town of Kharumwa (Msalala), SE Geita District, Mwanza Region. PL 974/98 lies partly in Shinyanga District, Kahama Region.

Access to Kharumwa from Mwanza is via the Kamanga or Busisi ferry to Sengerema and thence southwards via Ngoma, Busolwa and Ligambe, a distance of some 115 kilometres. The causeway crossing a large mbuga between Ngoma and Busolwa has been damaged in places by the El Niño rains, making this route impassable when the mbuga is waterlogged. Travel time from Mwanza is approximately 4.5 hours, which includes a ferry crossing of 30 minutes.

An alternative route, more suitable for use during the rainy season, involves travelling via Geita, then south on the newly-constructed road to Bulyanhulu mine, and thence eastwards on the mine's water pipeline service road to Kharumwa. This involves a slightly longer travel time than the Ngoma route.

A much longer access route is via Shinyanga and Kahama and thence northwards on the newly-constructed road serving Bulyanhulu mine.

Geographical details of the areas are as follows:

PL 257/94 Siga Hills

This PL's northern boundary lies some 4 kilometres south of Kharumwa (Msalala). Area is approximately 79 km^2. The PL lies in Quarter Degree Sheets 47/1, Nyang'hwale and 47/3, Bukwimba; corner co-ordinates are as follows:

Latitude S	Longitude E
3° 13' 30"	32° 37' 00"
3° 13' 30"	32° 40' 00"
3° 21' 00"	32° 40' 00"
3° 21' 00"	32° 37' 00"

PL 974/98 Magamba

The northern boundary of this PL lies some 9 kilometres south of Kharumwa. Area is approximately 23.8 km^2. The PL lies in Quarter Degree Sheet 47/3; corner co-ordinates are as follows:

Latitude S	Longitude E
3° 17' 00"	32° 40' 00"
3° 17' 00"	32° 41' 00"
3° 20' 00"	32° 41' 00"
3° 20' 00"	32° 45' 00"
3° 21' 00"	32° 45' 00"
3° 21' 00"	32° 40' 00"

2.2.3 Climate, Infrastructure, Physiography

The principal topographic feature of the area is the Siga Hills that trend NNW-SSE and reach a maximum altitude of 1480 metres a.s.l. within the licences. To the west the mbuga and gently undulating plains overlying the granitic terrain lie between 1200 and 1220 metres altitude, and to their east lie alluvial flats at 1140 metres altitude.

The greenstone Siga Hills are moderately vegetated with various varieties of thorn trees whilst the low-lying granitic terrain is mostly cultivated with maize and cassava. Rice paddies occupy the waterlogged mbugas and alluvial flats.

2.2.4 Relevant Legislation

The mining industry in Tanzania is administered under the Mining Act 1998. Three types of licences are available to hold mining properties in Tanzania.

A Reconnaissance Licence is issued for one year and may be renewed for one additional year. The licence preparation fee is US$ 250 and the annual rental is US$ 10 per km^2. The licence holder may apply for a prospecting licence to cover all or part of the reconnaissance area. Applications for a licence must include a work program. Half yearly reports must be submitted and on expiry of the period, all data, maps and reports for the area under licence must be surrendered to the government.

A Prospecting Licence is issued for a period of up to three years and renewable two times for a period of two years each. At each renewal, 50% of the area of the licence is relinquished. The licence preparation fee is US$ 400, annual rental is US$ 30 per km^2, and the renewal fee is US$ 200. Applicants must submit particulars of financial and technical capabilities, work program and budget, and proposals for employment and training Tanzanians. Licence holders must submit quarterly reports, including copies of all data, maps, logs, interpretations, etc.

A Mining Licence will only be granted to the holder of a Prospecting Licence over the area. The license is granted for a period of 25 years or the life of the mine. It is renewable for periods not exceeding 15 years. The licence preparation fee is US$ 600, annual rental is US$ 1500 per km^2, and the renewal fee is US$ 200. The applicant must submit a feasibility report including environmental and health safeguards, plans for local sourcing of goods and services, and employment and training of Tanzanians. The licence holder must submit regular reports according to the regulations.

The Act also requires that the licence holder make agreements with lawful occupiers of the land and obtain their written consent to carry out mining and prospecting operations. Compensation may be payable. The Minister may intervene if consent is withheld unreasonably.

There is neither State obligation to participate in mining ventures nor any requirement for local equity.

The Mining Act provides that the Minister may enter into a mineral agreement (not inconsistent with Act) for the purpose of granting a Prospecting or Mining Licence in order to define terms and conditions to be included in the licence.

Matters of taxation, duties and royalties related to a mining project would be negotiated and agreed upon in the mineral agreement provided for above.

2.3 PROPERTY DESCRIPTION AND LOCATION - MALI

The following general information is taken from Mbendi (2001), the U. S. Central Intelligence Agency (2001), and mining company corporate web sites (Anglogold 2001, and Randgold 2001).

Mali is an independent republic (gained independence from France in 1960) with an area of approximately 1,240,200 km^2. The country is land-locked and forms part of the West African region. Mauritania and Senegal lie to the west on the Atlantic coast. The capital city is Bamako. Other major cities are Segou, Timbuktu, and Kayes.

French is the official language. The local currency is the CFA-franc, which is guaranteed by the French government. The exchange rate in April 2001 was 1US$ = 745 CFA-francs.

Air France, Sabena and Iberia are the major airlines serving the country from Europe to the capital of Bamako. Regional airlines provided service from Mali to other parts of West Africa. There is a good network of roads throughout the country.

Mining is the key industry and has attracted significant foreign investment in recent years with the development of the Sadiola mine and (Anglogold/IAM Gold, resource 106 million tonnes grading 2.4 grams gold/tonne, 500,000 ounces per year at a total cash operating cost of US$130/ounce), the Yatela mine (Anglogold/IAMGold, resource 13 million tonnes grading 3.7 grams gold/tonne) in western Mali, and the Morila mine (Randgold, total resource 84.4 million tonnes grading 3.8 grams gold per tonne) in south-central Mali. Annual gold production is currently about 965,000 ounces per year.

Mali is among the poorest countries in the world, with 65% of its land area desert or semi-desert. Economic activity is largely confined to the riverine area irrigated by the Niger river in the south half of the country. Over 80% of the labour force is engaged in farming and fishing. Cotton remains the major export and, other than the mining industry, industrial activity is involved with processing of farm commodities.

Foreign travelers to the country need to be very aware of vaccination requirements, lack of availability of prescription medicines, and the need for advanced payment for any medical services required regardless of insurance coverage.

2.3.1 Property Description

AXMIN holds interests in the Netekoto, Satifara, Kofi and Metadia Licences pursuant to agreements with African Selection Mining Corporation ("ASMC") (a junior Canadian mining company) and its wholly owned subsidiary African Goldfields Corporation (a British Virgin Islands corporation). AXMIN has earned an 87% interest in ASMC's 80% interest in the Netekoto and Satifara Licences and in ASMC's 75% interest in the Kofi and Metadia Licences. The remaining interest is held by the Government of Mali (20%) and in addition a local partner interest of 5% in Kofi and Metadia.

The properties are held under exploration licences granted by the Government of Mali.

AXMIN has historic involvement in a fifth property, Yatia South, which is currently in process of renewal and expansion.

Netekoto, Kofi, Metadia, and Yatia are contiguous licences. Satifara is located approximately 100 km to the northwest.

Licence	Date Awarded	Renewal Date	Current Area Hectares	AXMIN Earned Interest
Netekoto	15/04/1996	15/09/2003	5,375	70%
Satifara	10/12/1996	15/09/2003	4,290	70%
Kofi	24/11/1997	30/11/2002	19,800	65%
Metadia	21/09/1999	21/09/2001	800	65%

2.3.2 Property Location and Access.

All of the properties are located in western Mali near the Mali-Senegal border, approximately 380 km west of the capital city of Bamako.

Access to the Netekoto-Kofi-Metadia-Yatia South project area and to the Satifara area is via the Kayes-Kéniéba road, a 10-hour (dry season) to 16-hour (rainy season) drive from Bamako. Kéniéba can also be accessed from Dakar, Senegal during the dry season (12 hour drive). Charter aircraft can land at the laterite airstrip in Kéniéba.

2.3.3 Climate, Infrastructure, Physiography

The region is characterized by a climate dominated by the alternation of dry (November to June) and rainy (July to October) seasons. The vegetation is of wooden savannah type or forest with frequent gallery forest along the creeks. Warthogs, rare antelope, monkeys and various species of birds represent the fauna.

Artisanal gold mining is the main activity of the local population. Millet, corn and peanuts are cultivated during the rainy season. Cattle, sheep and goat breeding are also common.

The terrain is relatively flat with a few elongate hills that reflect the underlying geological structures.

Infrastructure is poorly developed in the area, however, ongoing gold mine development at Sadiola, Yetala and Loulo at least provides a degree of support for the mining industry in the area.

2.3.4 Relevant Legislation

The mining code is based on French civil law. The mining code was revised in 1991 (Mining Code: Ordinance No.91-065/P-CTSP of September 19, 1991 and Regulations: Decree No.91-277/PM-RM of September 19, 1991) with further revision in August 1999 (Ordinance No. 99-032/PRM). The State owns all mineral rights. Standard agreements are available. A scale of fees based on area is applied to the licences.

A Founding Agreement ("Convention d'Etablissement") is signed between the foreign company and the Malian government before exploration or mining commences. The agreement, negotiated between the parties, comprehensively fixes all of the conditions that will apply to the exploration and, in the event of a discovery, exploitation periods. The conditions include work obligations, reporting, taxes, duties, duty-free arrangements, state equity participation, etc.

Prospecting licences ("Autorisation de Prospection") are awarded for 2 years and cover 8 km^2.

Exploration Licences ("Permis de Recherche") are granted by the government for specific commodities, for three years, but after two years half of the area of the licence must be relinquished in one or several areas at the discretion of the holder. The licence is renewable twice for a further three years each time over an area that must be reduced by half each time it is renewed. No maximum size is provided in the law for gold exploration licences although, recently, the maximum size of a gold licence has been restricted to 500 km^2.

A mining licence ("Permis d'Explotation") is granted by decree for a maximum period of 30 years renewable in tranches of 10 years. The area of a mining licence cannot exceed the area of the exploration licence from which it was derived. Modest fees (CFA-franc 400,000 or US$ 537) are payable when a mining permit is granted or renewed. There are also small annual rents due based on the area of the permit. The State has the right to hold a 10% carried interest and may elect to hold an additional participating interest up to 10%.

Fiscal conditions are mostly set out in the Founding Agreement.

The foreign company may repatriate capital and dividends.

Generally mining ventures are free of corporate tax for the first five years of production. Thereafter the tax rate is 35%, or less, when profit is reinvested in Mali. A depletion allowance can be negotiated up to 27.5%. All equipment for the project can be imported duty-free during the exploration period and for the first three years of the production period.

There is generally a 3% royalty payable on value of product less direct production costs plus a 3% value added tax.

2.4 PROPERTY DESCRIPTION AND LOCATION – SENEGAL

The following general information is taken from Mbendi (2001) and the U. S. Central Intelligence Agency (2001).

Senegal is an independent republic (gained independence from France in 1960) with an area of approximately 196,200 km^2. The country forms part of the West African region and is situated on the Atlantic coast, south of Mauritania and north of Guinea-Bissau and Guinea. The capital city is Dakar. Other major cities are St. Louis, Thies and Koalack.

French is the official language. The local currency is the CFA-franc, which is guaranteed by the French government. The exchange rate in April 2001 was 1US$ = 745 CFA-francs.

Air France and Air Afrique are the major international airlines serving the country to the capital of Dakar. Regional airlines provided service from Mali to other parts of West Africa. There is a good network of roads throughout the country.

Senegal's mining industry is a small but important contributor to the country's GDP. Phosphate and heavy mineral sands occur in the coastal basin. Gold, diamonds, iron ore, and base metal occurrences are known in the Precambrian of eastern Senegal but there is no major production.

In 1994 Senegal initiated economic reforms with the support of the international community. The reform program has produced an annual increase in GDP of 5% per year, inflation has been reduced to 2% per year, and the fiscal deficit has been cut to 1.5% of GDP. Investment has risen steadily and private sector activity now accounts for 82% of GDP. On the negative side Senegal faces deep-seated urban problems of chronic unemployment, juvenile delinquency, and drug addiction. Cocoa remains the major export. Oil refining and mining industry also contribute to the GDP and export earnings with the remaining industrial activity involved with processing of agricultural and fisheries products.

Foreign travelers to the country need to be very aware of vaccination requirements, lack of availability of prescription medicines, and the need for advanced payment for any medical services required regardless of insurance coverage.

2.4.1 Property Description

The property is held under an exploration licence from the government of Senegal. The government retains a 15% carried interest in the property.

Pursuant to a joint venture agreement dated February 11, 2000 with Avgold, AXMIN has the right to earn 100% of Avgold's interest in the Sonkounkou property. Avgold may, at any time prior to a decision to mine or within 3 months of a decision to mine, claw back up to a 51% participating interests in the project by paying AXMIN an amount equal to two times the funds expended to that date by AXMIN, times the percent interest to be clawed back by Avgold.

Licence	Date Awarded	Renewal Date	Current Area Hectares	AXMIN Earned Interest
Sonkounkou	20/03/1998	Dec. 2002	34,100	100%

2.4.2 Property Location and Access

The Sonkounkou property is located in southeastern Senegal on the border between Senegal and Mali.

Access to the south part of the property is via paved road from Dakar to Kendouga, a distance of approximately 750 km. Kendougou is located near the southeast corner of the licence area. Unpaved roads and trails provide ready access to the project area.

The north border of the Sonkounkou property is the Faleme river, which marks the Senegal-Mali border.

2.4.3 Climate, Infrastructure, Physiography

The region is characterized by a climate dominated by the alternation of dry (November to June) and rainy (July to October) seasons. The vegetation is of wooden savannah type or forest with frequent gallery forest along the creeks. Warthogs, rare antelope, monkeys and various species of birds represent the fauna.

The terrain is relatively flat with a few elongate hills that reflect the underlying geological structures.

The mining industry in Senegal is not well developed and infrastructure in eastern Senegal is poorly developed.

2.4.4 Relevant Legislation

The mining code is based on French civil law. The State owns all mineral rights.

Exploration Licences are granted by the government for four years, and are renewable twice for three years.

If the exploration is successful, the licence holder enters into a new contract agreement with the State. This agreement regulates the relationship between the licence holder and the State during the mining phase. Mining concessions are granted for 25 years and are renewable. Mining licences are granted for 5 years and are renewable. During the construction and commissioning period the permit holder benefits from a special tax regime aimed at promoting the development of the mining sector.

Companies operating in the mining sector are eligible for the benefits of the Investment Code.

Any investment reaching CFA-francs 5,000,000 (US$ 6,711) is expected to create at least 3 jobs.

No taxation information was available to Howe from the Mbendi and CIA sources. Given the thorough information from these sources for other countries, Howe would suggest that the taxation of new mining developments receives special treatment and would be subject to negotiation with the State at the time that the contract agreement relating to the mining licence is negotiated.

The mining company, which operates autonomously in its activities, is allowed to expatriate its profits.

2.5 PROPERTY DESCRIPTION AND LOCATION - GHANA

The following general information is taken from Mbendi (2001) and the U.S. Central Intelligence Agency (2001).

Ghana is an independent republic (formed by the merger of the British colony of the Gold Coast with the Togoland trust territory in 1957) with an area of 23,600 km^2. The country is on the south side of the West African region on the Gulf of Guinea between Cote d'Ivore and Togo. The capital city is Accra. Other major cities are Kumasi, Tamale, Cape Coast, Tema and Takoradi.

Ghana was the first country in colonial Africa to gain its independence. A long series of coups resulted in suspension of the constitution in 1981 and the banning of political parities. A new constitution, restoring multiparty politics, was approved in 1992.

English is the official language. The local currency is the Cedi. The exchange rate in April 2001 was 1US$ = 7200 Cedi.

Ten international airlines serve the country to the capital of Accra. Air Ghana operates regional and international services. There is a good network of roads throughout the country as well as a rail network form the coast to the main mining areas.

Mining is the key industry and has attracted significant foreign investment in recent years. Ghana has a long history of gold production (over 55 million ounces produced since 1880, primarily from the Ashanti greenstone belt) and has significant alluvial diamond production. Current gold production is approximately 1,200,000 ounces per year. The oil industry is also a key sub-sector of the country with refining and related lubricant and chemical production centred at Tema.

Ghana has a mixed economy and is actively privatizing State enterprises. The country has excellent hydro electric developments but has suffered power shortages in recent years due to drought. The planned natural gas pipeline from Nigeria to Togo, Ghana, and Benin will expand Ghana's energy sources.

The major exports are agricultural products, gold, cut diamonds, manganese, and timber.

Foreign travelers to the country need to be very aware of vaccination requirements, lack of availability of prescription medicines, and the need for advanced payment for any medical services required regardless of insurance coverage.

2.5.1 Property Description

Pursuant to an agreement dated June 28, 2000, AXMIN has an option to earn an 80% interest of Consolidated Minerals Limited's licence in the Cape Three Points area of Ghana. The government of Ghana retains a 10% interest leaving AXMIN the right to earn a net interest of 72% in the licence. AXMIN carries 100% of the expenditures until completion of a bankable feasibility study. Upon delivery of a feasibility study, Consolidated Minerals can participate on a prorata basis or dilute to a 1%NSR or elect to have its interest bought out by AXMIN.

Licence	Date Awarded	Renewal Date	Current Area Hectares	AXMIN Earned Interest
Cape Three Points	Jan.2001	Dec. 2004	7,522	72%
	Renewal approved by government in January 2001			

2.5.2 Property Location and Access

The Cape Three Points licence is located at the south end of the Ashanti Belt. The licence area runs north-northeast from the coast for a distance of approximately 24 km. Within the project area is a large exclusion area known as the Cape Three Points Forest Reserve.

Primary access to the area is via the main Agona-Axim road, which crosses the north part of the licence area in an east-west direction. There is an excellent local network of roads that provides access to the various plantations and villages in the area.

2.5.3 Climate, Infrastructure, Physiography

The region is characterized by a tropical climate with a rainy season from April to October. South of the Axim road vegetation is second growth forest with small cleared areas for cash crops and small areas of oil palm plantations. North of the Axim road is a large rubber plantation area.

The terrain is one of prominent hills and ridges with relief less than 200 metres. The regolith is dominated by lateritic soils with deep weathering masking the nature of the underlying bedrock geological units.

Infrastructure is well developed in the area, and mining services and supplies are readily available due to the well established mining industry in Ghana.

2.5.4. Relevant Legislation

The basic law is the Mining and Minerals Law, which was passed in 1986 as part of the Economic Recovery Program. This and associated legislation combines regulation of the mining industry with fiscal incentives for investors. All legislation is applied equally to Ghanaians and foreigners, except for provisions relating to artisanal mining and exploitation of construction materials, which sectors are reserved for Ghanaians.

All mineral rights are held by the State.

Four types of licences are provided for control of the mining industry:

Reconnaissance Licences to cover regional exploration programs but excluding drilling have no limitation in size and are for a period of 12 months and renewable.

Prospecting Licences to cover exploration, including drilling, are limited to an area of 150 km^2, are for a period of 2 years and are renewable with a 50% reduction in area upon each renewal.

Mining Licences for extraction of minerals (excluding alluvial gold and construction materials). Mining licences are limited to 50 km^2 and a company may hold a maximum of 150 km^2 of mining leases.

Restricted leases are for Ghanaians only and cover construction materials and artisanal mining.

The State is entitled to a 10% free carried equity interest in all mineral ventures. The State also has the right to acquire an additional 20% participating interest at fair market price.

Royalties on mineral production vary from 3% to 12% of the gross value of minerals produced. The variation in royalty % is related to the “operating margin” and is designed to prevent royalties from becoming too onerous during times of low profitability.

Basic corporate tax rates are 35% with provisions for capital cost allowance and loss carry forwards. There is also provision for an additional 25% tax under the additional profit tax of 1985.

3.0 DEPOSIT TYPE MODELS FOR THE PROJECT AREAS

3.1 Introduction

The project areas are all underlain by Precambrian cratons. The Central African Republic and Tanzania properties are underlain by Archean greenstone belts and the gold mineralisation in those areas is similar to that in Canadian Archean terrane such as the Abitibi Greenstone Belt.

The projects in Mali, Senegal, and Ghana are underlain by the West African Craton, which is primarily comprised of greenstone belts of Lower Proterozoic (Birimian) age. The Birimian of Ghana is the type area for this style of gold mineralisation.

3.2 Overview of Archean Vein-type Au Mineralisation

Archean lode gold deposits occur in a variety of lithological and structural settings in greenstone belts of the Canadian Shield and other world localities (Tanzania, Australia, etc.). "In general, the ores are derived from hydrothermal fluids and consist of veins (open space) and altered wall rock (replacement or metasomatism). The veins generally consist of coarse or cherty quartz with lesser amounts of albite and carbonate, tourmaline, sericite and chlorite. Characteristically, the best grades occur in veins structures, which show evidence of late stage brittle fracture. In some systems, tourmaline or carbonate may be the principal constituent of the veins. Opaque minerals rarely constitute more than 5% of a vein. Pyrite is invariably present and is the most abundant sulphide; pyrrhotite and arsenopyrite are common, and other opaque minerals may include galena, sphalerite, chalcopyrite, molybdenite, stibnite, tellurides and scheelite. In greenschist facies rocks, the altered wall rock immediately adjacent to the veins, is characterized by minerals that also occur in the veins: carbonates, quartz, sericite, albite and pyrite" (Roberts, 1988). Fuchsite is also present in many major deposits (Thorpe *et al.*, 1984).

Typically, ore grade gold occurs in the quartz, and in small fractures in quartz, and in the wall rock where it is usually associated with iron sulphides. It is not uncommon for most or all of the gold of an ore zone to be contained in wall rocks immediately adjacent to veins. (Roberts, 1990).

In major districts, extensive, widespread wallrock alteration is common. Carbonate alteration (commonly ankeritic carbonate) imparts a distinctive brown weathering surface to the altered rocks. On fresh rock surfaces, the carbonate alteration generally imparts a much lighter colour to the rock than the equivalent unaltered rock. Silicification and sericitization are also common and generally also cause a bleaching of the original rock colour.

The host and/or mineralized rocks for Archean vein-type gold deposits are generally tholeiitic pillowed basalts, thin units of komatiitic volcanic rocks, felsic and/or mafic pyroclastic rocks, sedimentary rocks (e.g., greywacke, conglomerate) and highly altered equivalents (carbonatised, sericitised, pyritised and less commonly albitised). Associated rocks include volcaniclastic rocks, sedimentary rocks of greenstone provenance, chemical sediments (e.g. iron formation, chert), felsic porphyry intrusives and mafic or ultramafic intrusive rocks (Thorpe *et al.*, 1984).

On a regional scale, the gold deposits are located in Archean greenstone belt terrane and are commonly associated with regional faults also commonly known as ‘breaks’, shear zones, or deformation zones, that can extend for several hundred kilometres (e.g. Porcupine-Destor and Larder Lake faults of the Abitibi Belt in Canada). On a smaller scale, the vein systems often occur in the central parts of small portions of the regional structures. “The intrusions that are spatially associated with gold mineralisation tend to be concentrated within the regional structures. In addition, the nature of rocks, i.e. chemistry, competency, et cetera, determine whether the shear zone is classified as brittle, brittle-ductile or ductile, which in turn has a direct impact on the characteristics of the deposit.” (Roberts., 1990).

Canadian examples of Archean age vein-type gold deposits are the Red Lake (Campbell, Dickenson, etc.), Kirkland Lake and Timmins (e.g. Dome, Hollinger, Wright-Hargreaves, etc.) mining districts of Ontario.

3.3 Overview on Banded Iron Formation-Hosted Gold Deposits

The following is taken from Wilson (1997) and Guilbert and Park (1986).

Banded iron formation hosted (“BIF”) gold deposits consist of gold intergrown with quartz and/or sulphide minerals in deformed and structurally complicated iron-rich sedimentary rocks. These deposits mainly occur within Archean-aged greenstone belts (“Algoma-type”), though some are Early Proterozoic (“Lake Superior-type”). BIF host rocks are thinly layered/bedded chemical sedimentary rocks with alternating iron-rich and cherty (siliceous) layers and can have considerable lateral extents.

BIF’s are classified as chemical sediments. Four different types of BIF’s have been defined on the basis of their mineralogy of the iron-rich layers:

Oxide facies BIF: the iron rich layers are dominantly composed of magnetite-hematite;

Sulphide facies BIF: the iron-rich layers are dominantly composed of pyrite and/or pyrrhotite;

Carbonate facies BIF: consists of interbedded siderite, and chert;

Silicate facies BIF: contains abundant hydrous ferrous silicates (greenalite, stilpnomelane or minnesotaite) and is most commonly associated with either carbonate or magnetite-bearing rocks.

Gold occurs in its native state, and as free gold intergrowths with pyrite and/or pyrrhotite, arsenopyrite and/or magnetite may also be present in some deposits. Other accessory and trace minerals are similar to those found in mesothermal lode gold deposits, such as sphalerite, chalcopyrite, tetrahedrite, scheelite and molybdenite. Mineralogy of the host rock alteration is predicated upon the fact that the rocks are iron-rich. In the case of oxide-facies BIF, primary hematite-magnetite is replaced by pyrite-pyrrhotite with minor siderite. Quartz in the form of cross-cutting veins, is also a common alteration mineral and, most typically, the gold is intergrown with sulphides in the quartz veins. Chlorite is a common alteration product of silicate minerals here.

Most generally, BIF-hosted gold deposits are thought to form by the reaction of auriferous and sulphur-bearing hydrothermal fluids with the iron oxide (or sulphide) in country rocks, causing precipitation of gold and sulphides. The gold is present in quartz veins or the immediate wall rock, wherein the precipitation reactions occur. As such, the deposits are said to be stratabound because the specific chemical horizon responsible for gold precipitation is represented by a single sedimentary horizon. Access to the favourable chemical environments of the BIF for the hydrothermal fluids are provided by large-scale fault and shear systems in a manner similar to that visualized in mesothermal lode gold models.

Kerswill (1993) completed an extensive study on the models for iron-formation hosted gold deposits and noted that "banded iron formation hosted gold deposits have several common features but can be usually divided into stratiform and non-stratiform types on the basis of empirical (non-genetic) characteristics" (Figure 3-1).

Table 3-1 is a summary of characteristics of BIF-hosted gold deposits taken from Kerswill (1993).

Canadian and world examples of banded iron formation hosted gold deposits are the Geraldton, Pickle Crow, Musselwhite and Detour Lake districts of Ontario, Doyon-Silver Stack, Dumagami, Eagle and Montauban districts of Québec, Lupin and Contwoyto Lake of the N.W.T., Lake Victoria BIF hosted Au deposits of Tanzania, Kolar Gold fields of India and the Homestake BIF hosted Au deposit in the USA.

3.4 Overview of Lower Proterozoic Birimian and Tarkwaian-Type Gold Deposits

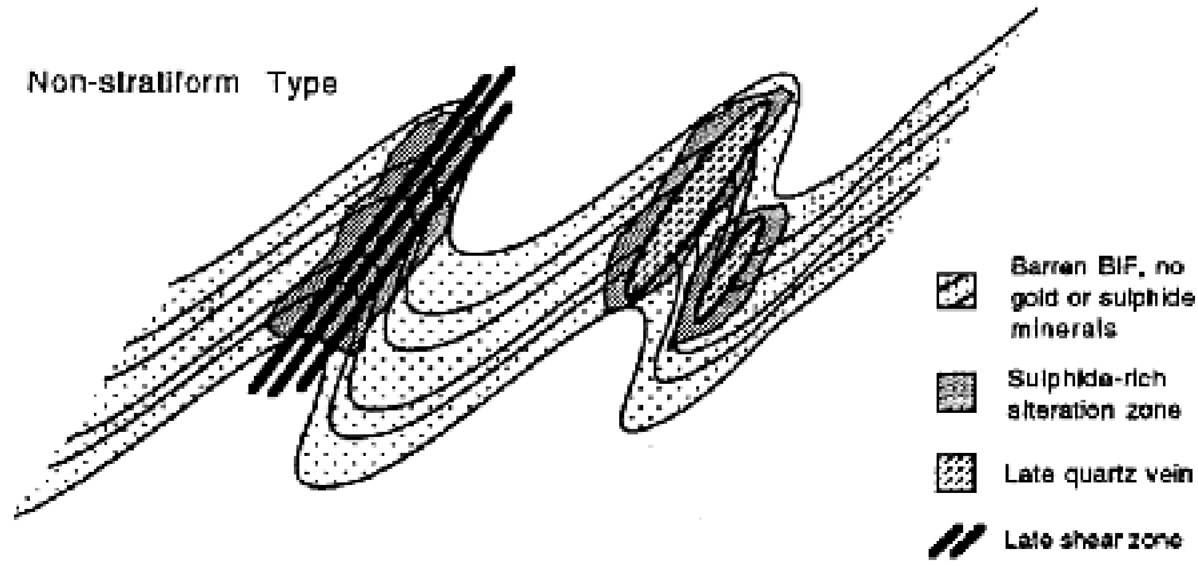
3.4.1 Overview of Birimian-type Gold Mineralisation

The type area for Birimian-hosted gold deposits is along the west side of the Ashanti greenstone belt in Ghana. Approximately 48 million ounces have been produced from the Birimian type deposits since the early 1900's. The gold deposits are associated with a prominent northeast trending regional structural corridor. The fault structures do not appear to be continuous but rather appear to be overlapping parallel features that can be traced for many kilometres along strike.

In general, the areas with the most intensive and extensive structural dislocation contain the most extensive gold mineralisation.

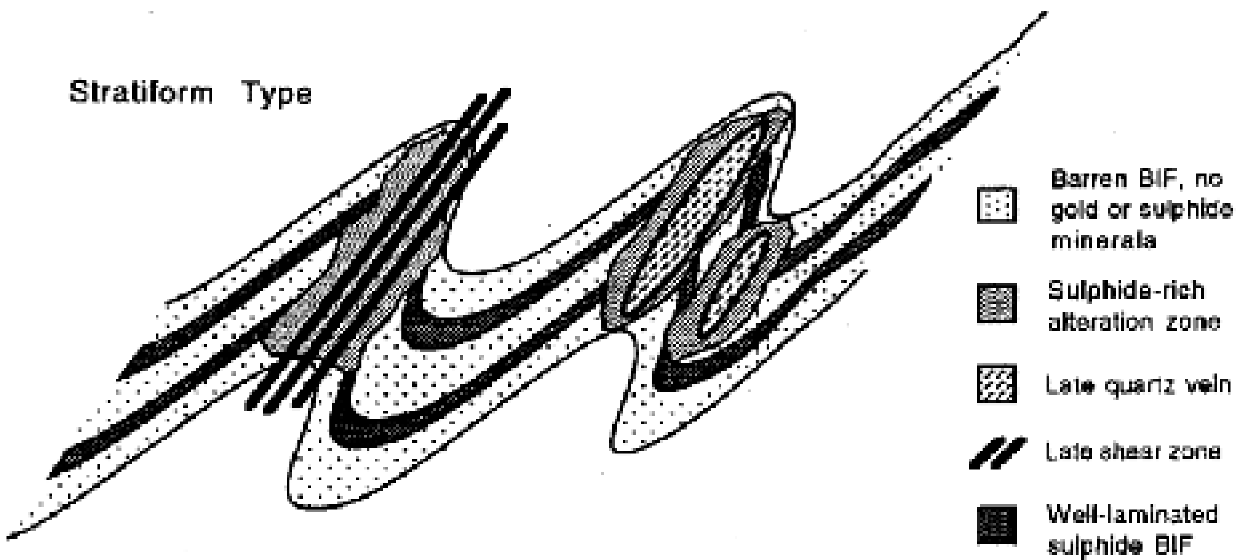
The gold deposits are structurally controlled, quartz-vein-type mineralisation, similar to Archean age deposits in similar structural settings in other Precambrian greenstone belts around the world. These deposit types have been described in Sections 3.2 and 3.3.

An apparently significant difference between the Archean-type and the Birimian-type gold mineralisation is the dominance of metasedimentary rocks as the host rock for the mineralisation compared to metavolcanic dominance in general in the Archean deposits. Beyond the difference in host rock type, the deposits are very similar in the variations of vein system types, accessory mineralogy, and overall structural setting.



Gold restricted to late structures or to sulphide BIF immediately adjacent to such structures.

Examples are many and include the North ore zone, Geraldton, Ontario, Central Patricia and portions of Pickle Crow, Pickle Lake, Ontario, numerous deposits in Western Australia, including Hill 50, Nevoria and Water Tank Hill, numerous deposits in Zimbabwe, including the Lennox Mine, and probably São Bento in Brazil and the Cullaton B Zone, NWT.



Gold occurs in thin but laterally continuous units of well-laminated sulphide BIF as well as in sulphide-rich alteration zones adjacent to late structures.

Examples are few but include Lupin, NWT, Jardine, Montana, and probably Homestake, South Dakota, all within sediment-dominated settings, as well as Morro Velho and Cuiabá, Brazil, and probably Agnico-Eagle, Quebec, all within mixed sedimentary-volcanic terranes.

Figure 3-1 The two principal types of BIF-hosted gold deposits. (taken from Kerswill, 1993)

In equatorial Africa, most of the major Birimian gold deposits occur as topographic highs since the siliceous nature of the mineralisation is more resistant to weathering than the surrounding rocks. Weathering and related oxidation may release refractory gold from sulphide rich gold mineralisation and produce a free milling ore in the residual soils.

3.4.2 Overview on Tarkwaian-type Gold Mineralisation

The Early Proterozoic conglomerates of the Tarkwaian Supergroup in Ghana are considered to be closely analogous to the Witwatersrand gold deposits of South Africa. Approximately 7 million ounces of gold have been historically recovered from underground gold operations in the vicinity of Tarkwa. The conglomerates unconformably overlie the Birimian volcanic-sedimentary rocks.

The gold in the Tarkwaian conglomerates is considered to be of alluvial origin with the probable source being the erosion of the Birimian quartz-vein deposits. The gold was likely concentrated in high-energy fluvial paleo-placers which were probably more widespread that the present Tarkwaian units.

Virtually all of the gold is free milling and occurs in the matrix of quartz-pebble conglomerates.

3.5 Overview of Precambrian Iron Ore Deposits

As described in Section 3.3, iron ore deposits are generally extracted from weathered and/or fresh Archean (Algoman-type) or Proterozoic age (Lake Superior-type) cherty banded iron formations or BIF's.

Iron formations are normally thin-bedded, with strong colour contrast between dark bands of hematite or magnetite, red bands of jasper and light to white bands of chert. These primary unoxidized BIF units are called taconites, which define BIF units dominated, by magnetite, iron silicates and chert with hematite and siderite. According to Guilbert and Park (1986), iron in the BIF's of the world is contained in several compounds which typically include granular magnetite (Fe_3O_4), hematite (Fe_2O_3) as granular black material, as crystalline specularite, as powdery "soft red hematite" or as reniform "kidney ore" and massive limonite [$Fe_2O_3 \bullet nH_2O$, $Fe(OH)_3$, or $FeO \bullet OH$]. Siderite, chlorite, greenalite, chamosite, minnesotaite, grunerite, stilpnomelane, fayalite, jasper, pyrite and pyrrhotite vary in abundance.

Mineable iron ore deposits are sedimentary beds with cumulative thickness typically from 30m to 150m and can have strike length of several kilometres (Gross 1984). In many of the iron ore deposits, repetition of beds caused by isoclinal folding or thrust faulting have produced widths that are economically mineable (Gross 1984). Ore mineral distribution is largely determined by primary sedimentary deposition. Granular and oolitic textures are typically common in iron ore deposits (Gross 1984).

TABLE 3-1 CHARACTERISTICS OF BIF-HOSTED DEPOSITS (Kerswill, 1993)

Features common to all deposits

There is a very strong spatial association between native gold and iron-sulphide minerals
Gold-bearing quartz-rich veins and (or) shear zones are present locally abundant
Deposits occur in structurally complex settings
Ores contain only background contents of lead and zinc

Features diagnostic of non-stratiform deposits	Features diagnostic of sediment-hosted (Lupin-like) stratiform deposits
Deposits are non-stratiform	Deposits are stratiform
Gold is commonly not restricted to sulphide BIF or veins that crosscut BIF	Gold is mostly restricted to sulphide BIF or to veins that crosscut sulphide BIF
Sulphide BIF does not occur in laterally continuous units	Sulphide BIF occurs in several thin but laterally continuous units that are conformably interlayered with barren silicate BIF and (or) carbonate BIF and clastic sedimentary rocks
Sulphide BIF is not well laminated; iron-sulphide minerals are commonly massive	Sulphide BIF is well laminated and chert-rich; iron sulphide minerals are typically finely layered
Distribution of iron sulphide minerals and gold are clearly controlled by veins and (or) late structures	Distribution of iron-sulphide minerals and gold are not clearly controlled by veins and (or) late structures
Orebodies are typically less deformed than associated rocks	Orebodies are as deformed as or more deformed than associated rocks
Iron-sulphide minerals tend to be relatively undeformed and unmetamorphosed	Iron-sulphide minerals show effects of deformation and metamorphism
Deposits are not restricted to, but are most abundant in, greenschist facies	Deposits occur in both greenschist- and amphibolite-facies terranes
Sulphidation textures are ubiquitous	Sulphidation textures are absent in stratiform ore
Orebody-scale alteration exists	Orebody-scale alteration is lacking; localized vein-related alteration does occur
Alteration products are generally similar to those in “mesothermal vein” gold deposits	Vein-related alteration is commonly atypical of “mesothermal vein” gold deposits
Oxide BIF is typically the principal BIF lithology in the deposit	Oxide BIF is lacking in the deposits, irrespective of metamorphic grade
Pyrite is commonly the dominant iron-sulphide mineral	Pyrrhotite is typically the dominant iron-sulphide mineral; in some cases early pyrrhotite has been replaced by pyrite
Arsenic, if present, is characteristically directly correlated with gold	Arsenic is generally abundant adjacent to late quartz veins veins but is not well correlated with gold
Silver contents of gold grains are typically low (Au/Ag ratios >8.0)	Silver contents of gold grains are moderately high (Au/Ag ratios ~3.0-7.0)
Deposits are relatively common, generally small and difficult to evaluate and mine	Deposits are rare, can be very large and easy to evaluate and mine, relative to non-stratiform deposits.

Typical tonnage and grade for 66 Algoman and Superior type iron ore deposits range from 1.4 million to 50 billions of tonnes at grades ranging from 22% to 68% Fe (Mosier, Singer and Menzies 1993). Mosier et al (op cit) provide the following data for the fifteen largest Algoman-Superior type mining districts in the world:

District	Country	tonnes/10^6	Grade(%Fe)
Minas Gerais	Brazil	51,250	30%
Mesabi	United States	50,500	22%
Noamudi-Joda-Gua	India	8,128	64%
Bailadila	India	3,600	57%
Kemmangudi-Hiriyur	India	2,804	64%
Cerro Bolivar	Venezuela	1,400	63%
Matto Grosso	Brazil	1,321	50%
Kanjamaali	India	1,016	37%
An-shan	China	883	28%
Labrador Trough	Canada	830	55%
Burnt Hill-Knob Lake	Canada	817	55%
Rowghat	India	752	65%
Krivoi-Rog	USSR	600	63%
Mutum	Bolivia	508	50%
Musan	N.Korea	404	36%

The fifteen deposits represent about 94% of the total resource base (historical production plus available resource) for this type of iron deposits. Note that many of these districts have had a long production history.

According to Guilbert and Park (1986), the evaluation of taconite ores (iron ore) is complex and basically requires geological and mineralogical studies. Guilbert and Park (1986) indicated that the mineralogy of the taconite ore is vital with high magnetite the prime consideration and grain size is critical (100 to 200 mesh liberation of magnetite most desirable). The waste component of taconite ores is also evaluated whereby if the ore contains more than 6% silica, it is undesirable. However, if the ore contains <3% SiO_2 it is also undesirable since it prevents slag formation in blast furnaces. Guilbert and Park (1986) have also indicated that low levels of sodium (Na_2O) and potassium (K_2O) in taconites are excellent because those elements are anathema to blast furnace linings. If the taconite ore contains more than 0.7% Ti, it produces a pasty slag and poor separation of the iron and phosphorous (P) affects the steel-making properties of the iron ore.

Gross (1984) stated that the preferred genetic model in the formation of iron formations invokes chemical, colloidal and possibly biochemical precipitates of iron and silica in euxinic to oxidizing environments derived from hydrothermal effusive sources related to fracture systems and offshore volcanic activity. Deposition may be distal from effusive centres and hot spot spring activity. Other genetic models derive silica and iron from deeply weathered land masses, or by leaching from euxinic sediments. Sedimentary reworking of beds is also common.

Gross (1984) listed the following ore controls and guides to exploration for both the Lake Superior and Algoma –types iron formation deposits:

1. Distribution of iron formation is reasonably well known from aeromagnetic surveys;

2. Oxide facies is the most important, economically, of the iron formation facies;

3. Thick primary sections of iron-formation are desirable;

4. Repetition of favourable beds by folding or faulting may be an essential factor in generating widths that are mineable (30 to 150m);

5. Metamorphism increases grain size, improves metallurgical recovery;

6. Metamorphic mineral assemblages reflect the mineralogy of primary sedimentary facies;

7. Basin analysis and sedimentation modeling indicate controls for facies development, and help define location and distribution of different iron formation facies.

4.0 CENTRAL AFRICAN REPUBLIC

The 2058 km^2 Bambari licence area is located in the central part of the Central African Republic ("CAR") and covers a 90 km strike length of the 250 km long Archean (early Precambrian) Bandas greenstone belt. The greenstone belt is geologically similar to other Archean greenstone belts in the world, which are known to host major gold deposits. The Bandas greenstone belt is considered to be the northwestern extension of the Kibali-Ituri greenstone belt of the Democratic Republic of Congo where numerous alluvial and primary gold deposits are known to occur. The Kilo-Moto mines in the Congo have produced over 10 million ounces of gold since 1904.

4.1 GEOLOGICAL SETTING

4.1.1 Regional Geology of the Central African Republic

The CAR is dominated by three main geological units, the Precambrian - Proterozoic age crystalline and schistose rocks, the Paleozoic sedimentary cover and the Mesozoic to Recent sedimentary cover (Figure 4-1). These units can be classified into distinct geological sub-units:

Mesozoic to Recent:
a) Recent aeolian sands and alluvial deposits
b) Carnot and Mouka Ouadda fluvial - lacustrine sedimentary formations (200-65 Ma)

Paleozoic:
Mambéré and Kombélé Series glacio-fluvial formations

Precambrian:
a) Upper Proterozoic metasedimentary sequence (schist - quartzitic group) (1200 Ma - 500 Ma)
b) Lower to Middle Proterozoic metasedimentary sequence (schist-quartzitic group (1800 Ma - 1200 Ma)
c) Archean Greenstone Belts (2,800 Ma)
d) Archean basement (>3000 Ma)

Precambrian

The Archean basement and the Lower to Middle Proterozoic age granitic - gneissic group form the basement complex that underlies the entire country. This complex is comprised of folded gneisses, amphibolites, pyroxenites, charnockites, granites, migmatites, mica-schists and quartzites. This complex is predominantly calc-alkaline to monzonitic in composition. In areas where younger granitic intrusions cut into the Upper Precambrian quartzitic group, the chemical composition tends to become to monzonitic due to an increase in epidote and apatite.

In contrast, the Upper Precambrian schist - quartzitic group lies unconformably above the Lower - Middle Proterozoic group and is exposed in the west and southeastern sections of the country. This complex is comprised of gently folded quartzites, schists, and sandstones. Both

Precambrian groups have undergone upper greenschist to lower amphibolite facies metamorphism. Tectonically, the country has undergone three orogenic periods (i.e. Eburnean orogeny, Kibalian orogeny and the Pan-African orogeny) dating from 1800 Ma to 500 Ma, where the region is dominated by a SE trending fold belt with local thrust faulting zones present in some sub-formations.

There are four known Archean greenstone belts in the CAR: Bandas, Boufoyo, Bogoin and the Mbomou Complex. The Bandas and Boufoyo – Dékoa (or Woula) are two parallel trending Archean age greenstone belts that are approximately 250 km long, trend NW-SE and occur in central CAR. The Bandas and Boufoyo greenstone belts are composed of volcano-sedimentary sequences and banded iron formation ("BIF") and are intruded by numerous small to large felsic to intermediate intrusive bodies. Both of these greenstone belts display geological and structural features typical of Archean greenstone belts worldwide. However, these greenstone belts have been affected by the Pan-African orogeny which is reflected in the CAR as widespread migmatization and granitization and the over thrusting of basement formations of the north over those located in the south. The Bandas greenstone belt is considered to be the northwestern extension of the Kibali-Ituri greenstone belt of the DRC whereby numerous alluvial and primary gold deposits are known to occur.

The Bogoin Greenstone Belt, located in west central CAR extends in a NW direction for approximately 10 km in length and 40 km in width and is composed of a lower unit of komatiites and komatiitic basalts and tholeiites, a volcano-sedimentary complex with greywackes, quartzites and some para-amphibolites and an upper unit of depleted komatiites, andesites and minor BIF units (Poidevin, 1991). The supracrustal units have been intruded by trondjemites and granites dated at 2.15 Ga (Poidevin, 1991). Most of the gold occurrences found in the Bogoin area are associated with a small eluvial deposits derived from quartz stockwork zones found within mafic to ultramafic rocks (Bernier, 1999).

The Mbomou Complex, located in SE CAR, was first described by Mestraud (1963) as an amphibole-pyroxenite complex and is comprised of amphibolites, amphibolite-pyroxenite gneiss, pyroxenitic amphibolites, and migmatitic pyroxenites-pyroxenites. Mestraud (1953) originally interpreted the Mbomou Complex as metabasite, however, future studies by Mestraud have suggested that the complex may have been sedimentary in origin. A review of the Mbomou Complex was completed by Poidevin (1991) and indicated that the Mbomou complex consisted of tholeiites, trondjemitic, andesitic and granitic orthogneiss and paragneiss. Two periods of metamorphism have affected the complex: 1) at 3.2 Ga, the complex was subject to granulite metamorphism and 2) retrograde metamorphism at 2.98 ± 0.01 Ga.

Paleozoic

During the Paleozoic, two distinct glaciation periods occurred in the CAR:

> Upper Ordovician to Lower Silurian (450 to 400 Ma): during which a large glacial ice sheet covered most of Central Africa, central Sahara, and minor portions of southern Africa and the Arabian peninsula.

Upper Devonian to Lower Permian (350 to 300 Ma): during which a large glacial ice sheet covered most of Central Africa, Egypt, and primarily in sub-equatorial Africa.

During these two glacial periods, the Devonian – Carboniferous age Mambéré Fluvioglacial Series was being deposited in western Central Africa. This fluvioglacial formation is comprised of tillites, sandstones, and silts and discordantly overlies the Upper Proterozoic age schist-quartzitic group. The Mambéré Series has also been recognized in the eastern part of the country (i.e.; Kombélé Series).

Mesozoic

During the Cretaceous (120-80 Ma), two thick (<400m), unmetamorphosed, flat-lying and poorly consolidated sequences of terrigenous / clastic sediments were deposited into two well-defined basins in the southwest (Carnot Formation) and the central-eastern area (Mouka Ouadda Formation) of the CAR. These two distinct sedimentary plateaus cover an area of over 85,000 km^2.

In the Carnot area, the Carnot Formation disconformably overlies the Mambéré Fluvioglacial Series and is cut by three major NW-SE trending rivers within the plateau area. The Carnot Formation is subdivided into two distinct sequences, a lower arkosic sequence with frequent conglomeratic beds and an upper sandstone sequence with occasional conglomeratic beds. The formation was deposited during the erosion of both the Upper Proterozoic schist-quartzitic group and the Mambéré Fluvioglacial Series.

In the east, the Mouka-Ouadda Formation was also deposited during the same geological period, and was also deposited as a result of the erosion of the Precambrian - Proterozoic formations. The Mouka Oadda plateau has a surface area of approximately 40,000 km^2 and was deposited unconformably upon the Upper Proterozoic schist-quartzitic group in the south, and the Lower to Middle Proterozoic granitic - gneissic group in the northwest and northeast. The Mouka Ouadda Formation is approximately 400 to 500m thick, and is comprised of two distinct stratigraphic units:

- a basal conglomerate, sandstone and argillite sequence of approximately 50 metres in thickness and;

- an upper cyclical unit composed of very fine grained kaolinitic sandstones interbedded with minor coarse grained sandstone units. This unit varies in thickness from 100 to 400 metres.

The Mouka Ouadda sedimentary formation was deposited in a fluvio-lacustrine environment. Some of the basal conglomeratic and sandstone units are ferruginous in nature. It is important to note that both the Mouka-Ouadda and the Carnot sandstone plateaus show similarities in depositional environments, lithology, geological age and that both formations contain diamondiferous conglomerates and/or sandstones (with eluvial and colluvial equivalents) at all levels within both geological formations.

Tertiary to Recent

Thin sheets of Tertiary to Recent aeolian sands and clays occur on both Mesozoic age sedimentary plateaus and Recent fluvio-lacustrine and alluvial sediments overlie and cover earlier formations in the north of the country.

4.1.2 Regional Geology of the Bandas Greenstone Belt

The following is taken from Bernier (1999):

"The Bandas greenstone belt belongs to the greenstone domain of the Archean basement division of the CAR, which comprises of at least three vestiges of volcano-sedimentary successions. The Bandas greenstone belt has been dated at 2.9 Ga, based on a cross-cutting granodiorite pluton dated 2828 ± 78 Ma (Lavreau et al., 1980). The belt shows a typical volcano-sedimentary stratigraphy composed of metavolcanic and metasedimentary sequences of massive-to-pillowed mafic to ultramafic metavolcanics interbedded with quartzite, banded iron formation ("BIF") and mica schist. This stratigraphy has been intruded, and is surrounded by, a syn-to-kinematic suite of trondjemite-diorite intrusives, granodiorite intrusives and large granite bodies, and by gabbro and diorite sills. The volcano-sedimentary succession uncomformably overlies an Archean basement complex composed of granulite, granitic gneiss and migmatite (Poidevin, 1977), and is overlain by detrital sediments. The basement complex extends south across the CAR and into the DRC, where it has been dated at 3086 ± 94 Ma (Lavreau and Ledent, 1976). The detrital cover comprises essentially of unmetamorphosed Lower to Middle (?) Proterozoic quartzites and mica-schists. The schists are locally migmatised and granitised and contain intercalated amphibolites and orthogneiss. All the rocks in the Roandji permit area have generally been affected by lower amphibolite grade metamorphism and by intense tectonic activity.

"The lithostratigraphy of the Bandas greenstone belt is most complete in its southernmost part (southeast third of the Roandji permit area; Figure 4-2), where it reaches a total thickness of more than 4 km (Poidevin, 1991). The belt can be subdivided into two basic units (Poidevin, 1979; Poidevin et al., 1981), a lower unit with three volcano-sedimentary cycles, and an upper unit composed mainly of metasedimentary rocks with some interbedded felsic tuffs. The lowermost cycle of the lower unit is exposed on the lower Ngou-Mbourou River (Figure 4-2), where it reaches an approximate thickness of 500m. It is composed of biotite schists intercalated with amphibolites and metamorphosed banded iron formation (the "itabarites"). The second cycle, about 200m thick is represented by alternating metamorphosed basalts and banded iron formation, whereas the third cycle, approximately 100m thick is formed by metamorphosed basalts, andesites and banded iron formation."

Table 4-1 presents a "best fit " summary of the table of formations for the Bandas greenstone belt area, CAR. The proposed rock units/assemblages found in Table 4-1 are derived from Poidevin (1991, 1979, 1977) and Poidevin et al. (1981).

Table 4.1
Table of Formations
Bandas Greenstone Belt
Central African Republic
(rock units derived from Poidevin (1991, 1979, 1977), Poidevin et al. (1981)

PHANEROZOIC
CENOZOIC
RECENT
Fluvial gravel, sand, clay, silt, latosols, duricrust, etc.
Formation of lateritic soils and saprolite (older??)

UNCONFORMITY

PRECAMBRIAN
PROTEROZOIC
LOWER TO MIDDLE (?)
Unmetamorphosed quartzites and mica-schists (with intercalated amphibolites and orthogneiss)

UNCONFORMITY

ARCHEAN
Late intrusives
Calk-alkaline granite-granodiorite (2.7 ± 0.1 Ga)
Diorites-trondjemites (2.9 ± 0.2 Ga)

INTRUSIVE CONTACT

Volcano-Sedimentary pile (>2.9 Ga)
Shales and greywackes intruded by tholeiitic gabbros
Calc-alkaline andesites and dacites
Banded iron formations interlayered with tholeiites
Serpentinites, amphibolites and coronitic tholeiitic gabbros

Basement (>3.086 Ga)
Granulite, granite gneiss, migmatite

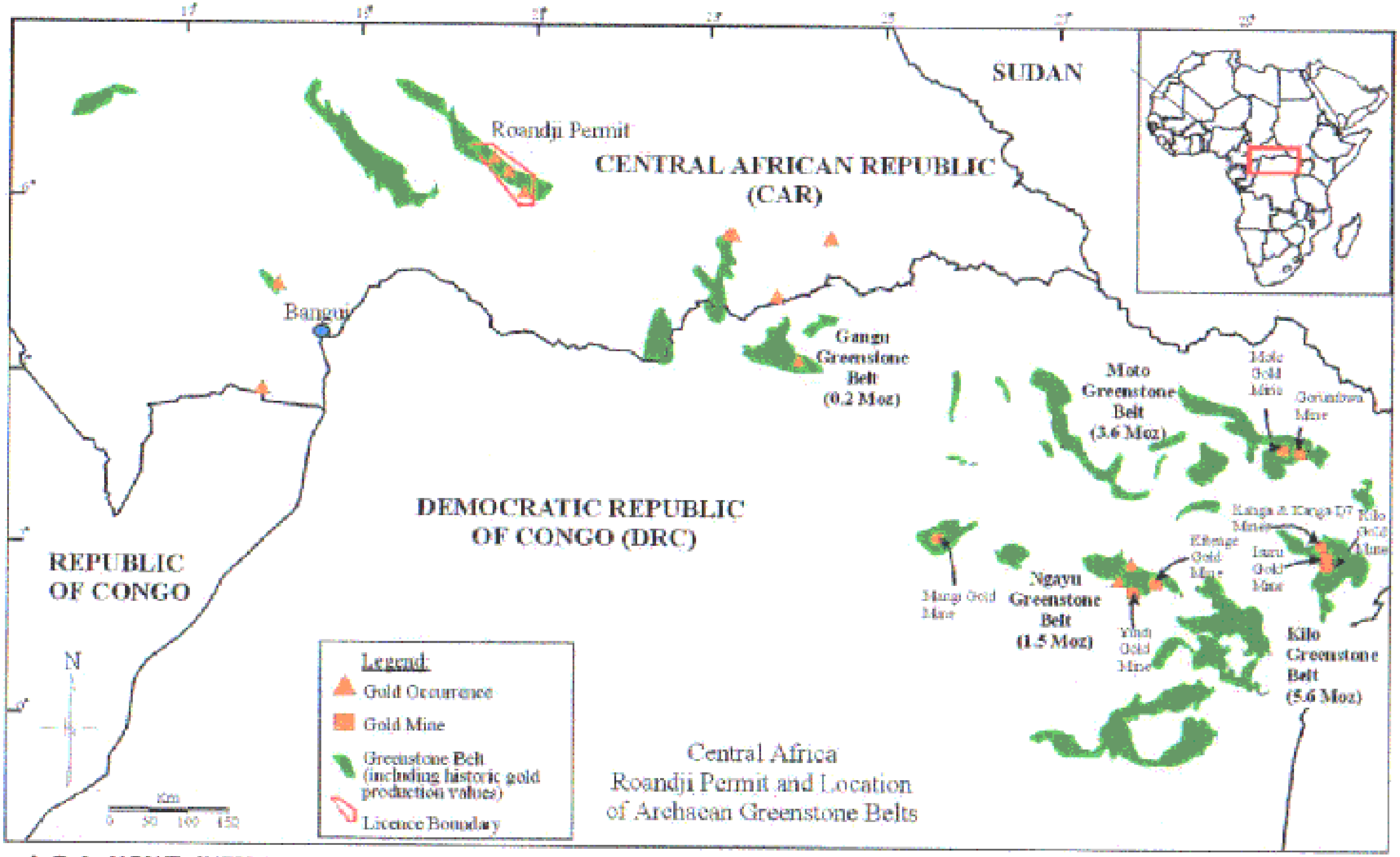


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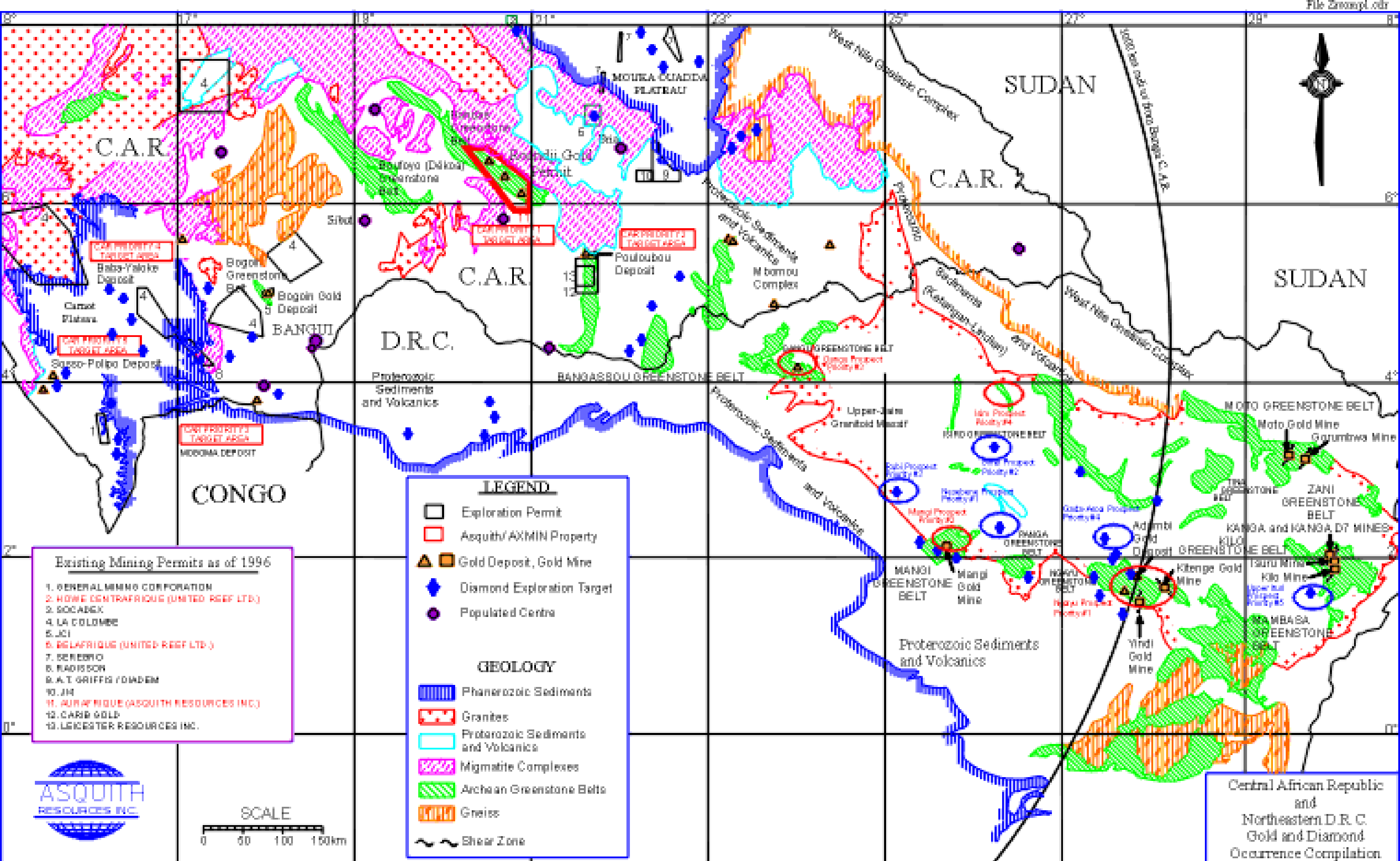
FIGURE 4-1



Courtesy of Asquith Resources Inc. A.C.A. Howe International Limited

Figure 4-2. Location of the main gold and diamond occurrences of southern C.A.R. and northeastern D.R.C. (Modified from T.E. Burns & Associates, 1996)

4.2 DEPOSIT TYPE MODELS FOR CENTRAL AFRICAN REPUBLIC

4.2.1 Introduction

Dostal *et al.* (1985) indicated that the known gold deposits of the Bandas greenstone belt; Goubadjia and Roandji are associated with strongly carbonatized metabasalts and silicified itabarites ("BIF" or "banded iron formation") rich in pyrite. Numerous hard rock gold showings occur within the greenstone belt however, most of the gold production of the CAR is derived from alluvial and / or eluvial deposits.

Due to the lack of systematic mineral exploration work for gold in the CAR, the Bandas greenstone belt is considered under-explored, however, its potential to host Archean vein type Au mineralization, BIF hosted Au mineralization or iron ore deposits should not be discounted. As well, the Bandas Greenstone Belt exhibits similar metallotects observed in known auriferous Archean greenstone belts worldwide which bodes well for future discoveries of gold, base metal and iron ore deposits.

The common denominator in all known gold occurrences of significance found in Archean greenstone belts worldwide is that the majority occur in structurally controlled settings where brittle fracture has created zones that allowed extensive circulation of hydrothermal fluids. Major regional structural features (faulting, folding, and intrusive related deformation) provide a focal point for selecting broad scale areas for exploration.

A review of relevant gold and iron deposit types is presented in Section 3.0.

4.3 HISTORY OF THE ROANDJI PROPERTY AREA

Sections 4.3.1 to 4.3.2.4 are excerpts taken from Bernier (1999).

4.3.1 CEM EXPLORATION WORK FROM 1929 to 1951

Following the establishment of European colonies in Africa in the late 1870's, the territory known as the Oubangui-Chari, (the current CAR, Northwest D.R.C. and southern Chad) was incorporated in 1910 with northern Chad, Congo and Gabon into the administrative region known as *l'Afrique Équatoriale Française* (A.E.F.) (French Equatorial Africa). French-sponsored research agencies and mining companies have been responsible for the assessment and inventory of geological resources in Central Africa for the last 78 years.

Rare geological descriptions by the first European colonialists to explore the Oubangui-Chari in the period 1884-1910 (Lacoin, 1903) were incorporated in a 1:5,000,000 scale geological map of Central Africa drafted in 1913 (Loir, 1918), a year after Brustier reported the first alluvial gold occurrences in the CAR, in the upper Ouaka drainage basin, north of Bambari. The Syndicat des Mines de l'Oubangui (S.M.O.) was formed in 1921 to follow-up on reported gold occurrences in the Bangassou area, and is credited with conducting the first broad-scale geological investigation in the CAR (Mestraud, 1982). The creation of exclusive mining zones for reserved substances by regional government decree in 1927, led to the formation of the **Compagnie Équatoriale des Mines (C.E.M.)** (Delhaye, 1931; Chandellier, 1948a,b; Vincotte, 1936a,b; 1938;), the Société d'Exploitation Minière en Oubangui (S.E.M.O.) and the Compagnie Minière de l'Oubangui Oriental (C.M.O.O.) and the first large-scale and systematic gold exploration programs in the CAR. The C.E.M. immediately targeted the Ouaka (formerly *Kouango*) river drainage basin, Northeast of Bambari, in a regional prospecting program based on the reported discoveries by Brustier of gold in the upper Kouango River (current Ouaka River) drainage basin (in 1912) and diamonds (in 1914) near Ippy (Middleton, 1932; Mestraud, 1982).

The potential of the area remained largely unknown until April 1929 when the Compagnie Équatoriale des Mines (C.E.M.) discovered the first two of the Roandji alluvial gold deposits, the Goudo (Banda for Gouda) Stream deposit, in a tributary of the Nguétépé River, and the main Bagueta (Banda for Bakéda) River deposit downstream from the Bacanga Stream, to the West. The discoveries were made as part of a broad-scale survey of the central Oubangui-Chari region (current CAR) initiated the previous year. Figure 4-3 shows the principal alluvial gold and diamond occurrences in CAR.

The Roandji alluvial gold fields were mined commercially by the Compagnie Équatoriale des Mines (C.E.M.) from 1929 to 1951 (Chandellier, 1948a, b; Vincotte, 1936a, b; 1938) (Figure 4-4 and 4-5). The C.E.M.-Roandji was the first official semi-industrial mining operation of the CAR and the former Afrique Équatoriale Française (A.E.F.) (Mestraud, 1982). Total gold production for the C.E.M.-Roandji is estimated at over 1521.5 kg (Carré, 1986). Although reported production figures for C.E.M.'s Roandji Division do not discriminate between the four individual mining camps (Roandji, Goubakou-Wouala, Goubadja, and Bonou), Mestraud (1982) estimated at 1,500 kg the yield of the Roandji camp alone and he cited a figure of 1,726 kg for the total CEM-Roandji division over the same period.

Maximum reported gold production by the C.E.M. was achieved in 1932 with 299.452 kg gold (Table 4-3). The grade of the alluvium in the Bakéda River averaged 1.65 g/m³ with a maximum of 5.5 g/m³ in 1929, but rapidly fell to an average of 0.45 g/m³ by December 1935 (Carré, 1986). The auriferous gravel unit varied in thickness from 0.3 to 1m and occurred at a depth of less than 1.5m. The width of the area mined is reported as 40 metres.

The three companies merged in 1930 to form the Compagnie Générale de Recherches Minières en Oubangui (C.G.R.M.O.).

The C.G.R.M.O. consortium hired Remina and Forminière, two Belgian mining companies to conduct their regional exploration programs. Remina was attributed the exploration rights to a large tract of land west of the Boungou and Kotto rivers and expanded the exploration work to include diamonds as well as gold (Delhaye and Borgniez, 1932). The Forminière was awarded a large concession east of the Kotto river (Forminière, 1956). The comprehensive exploration program sponsored by the C.G.R.M.O. led to two important discoveries in 1931, the Sosso gold deposits southwest of Berbérati (see Figure 4-2), which produced over 3.9 tonnes of gold between 1935 and 1950 (Gsell, 1952; Delorme, 1953a; Gueit, 1956) principally from alluvial deposits but also from eluvial and primary sources; and the Pouloubou alluvial gold deposit near Alindao (see Figure 4-2) which produced 3.3 tonnes of gold from 1932 to 1951 (Mestraud, 1953).

The same year (1931), the *Services des Mines de l'Afrique Équatoriale Française* (S.M.-A.E.F.) was created to replace the *Bureau d'Études Géologiques et Minières Coloniales* (B.E.G.M.C.-A.E.F.). The S.M.-A.E.F. undertook and sponsored a variety of geological missions throughout the region and later summarized early reconnaissance mapping and exploration efforts (numerous *compte-rendu de missions*) by Brustier (1923), Borgniez (1935) and Delhaye et Borgniez (1932) of the Remina, Babet (1934, 1935), Lombard (1935a), Polinard (1935) and others, into various compilation maps and reports (Demay, 1932; Korableff, 1937, 1940; Lombard 1935b,c; Légoux and Hourcq, 1943; Furon, 1947) which traced the first broad geological characteristics of the CAR and provided a framework for the design of later exploration and regional mapping programs.

The majority of the alluvial gold deposits mined by the C.E.M. in the Bambari Permit area are spatially associated with the BIF units. The Goubadja deposit, the south-easternmost of the alluvial gold deposits mined by the C.E.M. (1948-1951), has been linked to sheared and strongly carbonatised tholeiites (Foglierini and Mestraud, 1958; Poidevin, 1991). According to Foglierini and Mestraud (1958) this small deposit produced 6 kg of gold in 1950.

4.3.2 BUMIFOM AND THE DMG-AEF FROM 1945 to 1961

The *Bureau Minier de la France d'Outremer* (BUMIFOM), a French agency created in 1948 and predecessor to the BRGM, conducted a series of regional mineral exploration programs and detailed site-specific investigations in the CAR from 1949 to 1958. The BUMIFOM targeted the Roandji gold fields following the shut-down of the C.E.M. mining operations (Lenkchevitch; 1953a,b,c). An extensive program of trenching and pitting was performed in the Roandji area in 1953. The work, aimed at locating primary bedrock sources for the alluvial gold, revealed siliceous iron formation beds grading up to 4g/t gold and stockworks of fine quartz veinlets mineralized in trace gold following a 2 km long zone along the Gouda stream. As part of the same program, the BUMIFOM expanded their exploration to the southeast to include the Pouloubou alluvial gold area, which according to Noetzli (1954) was also mined by the C.E.M.

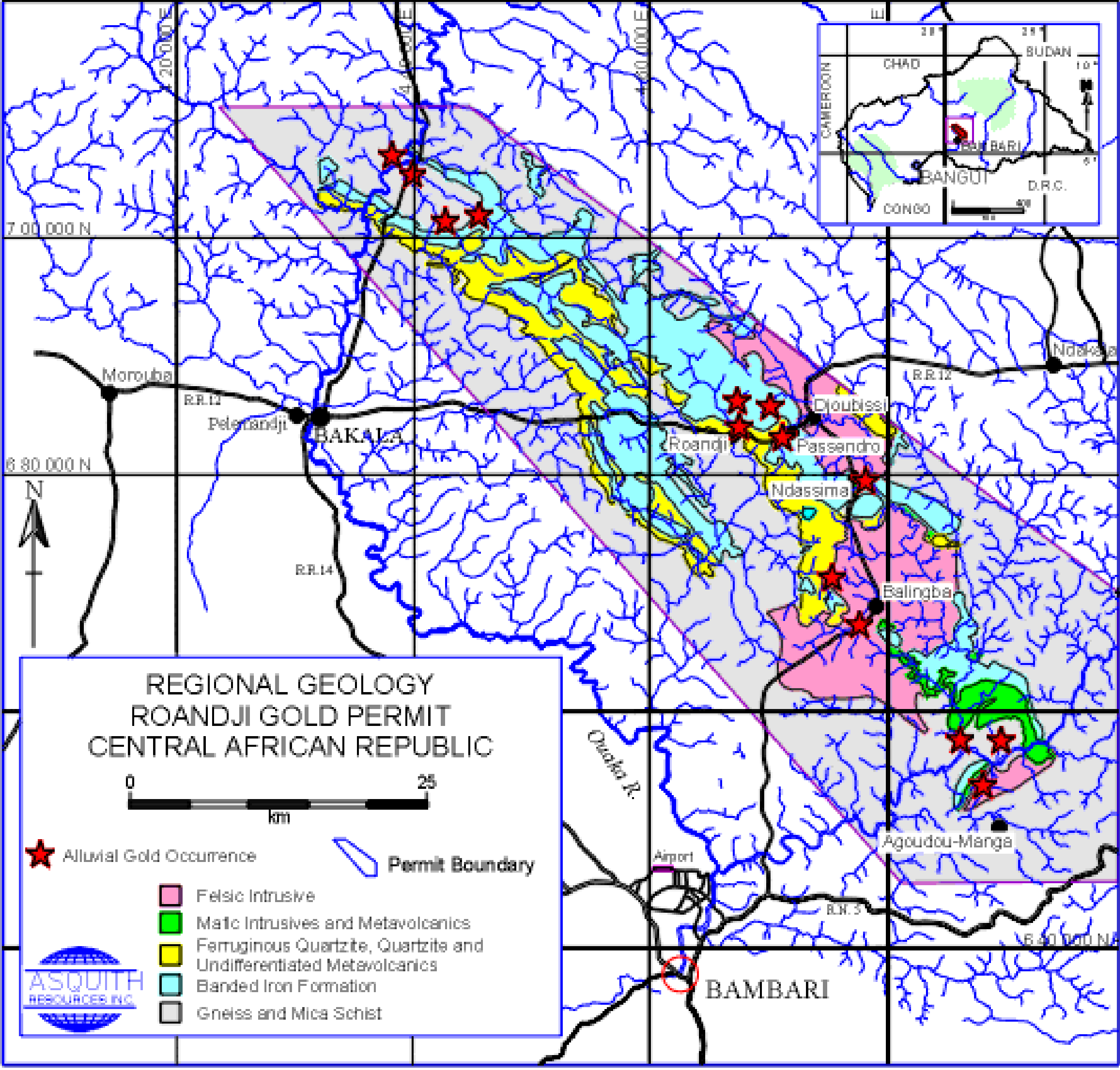


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Figure 4-3. Geology of the Roandji Property (modified from Poidevin, 1991)

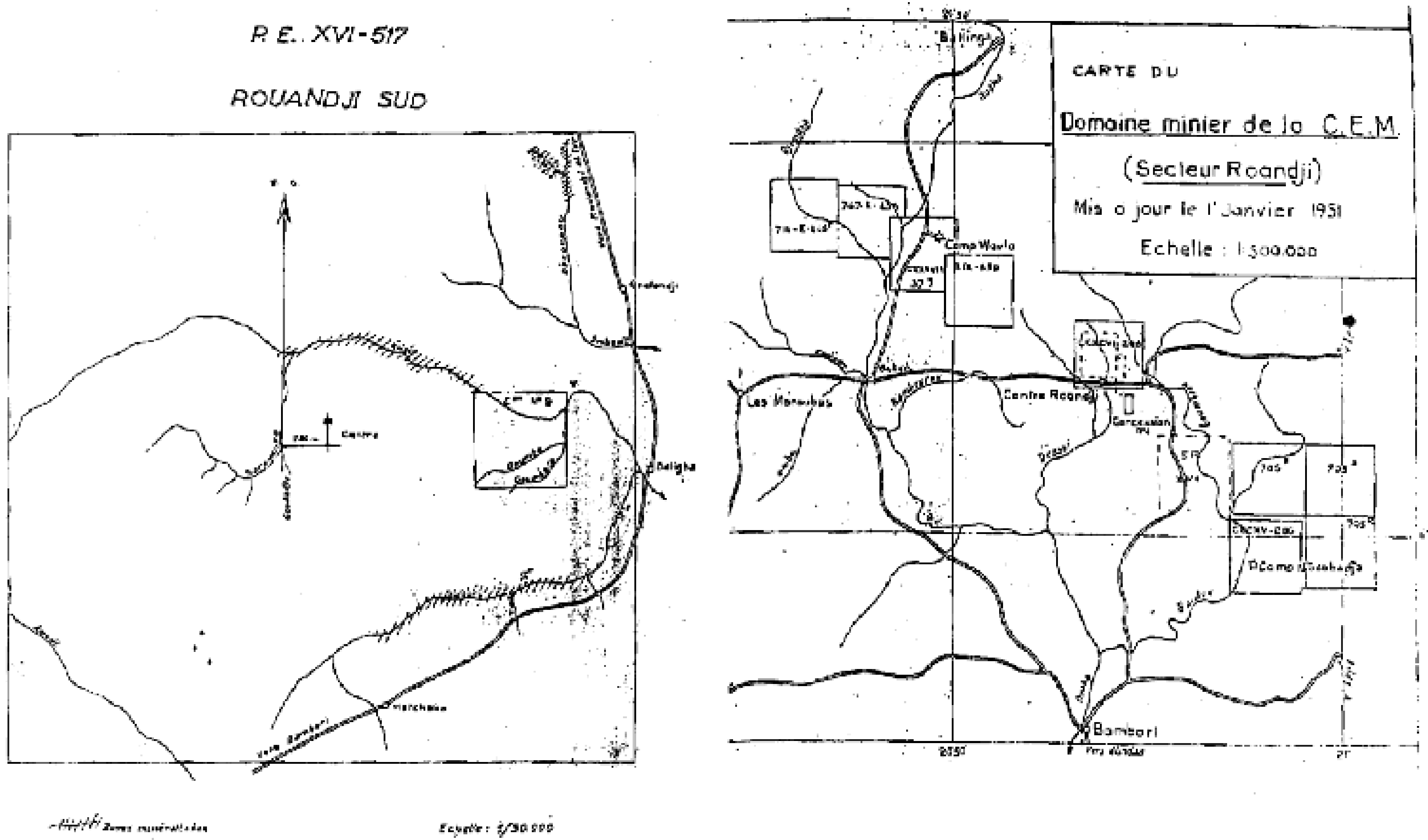
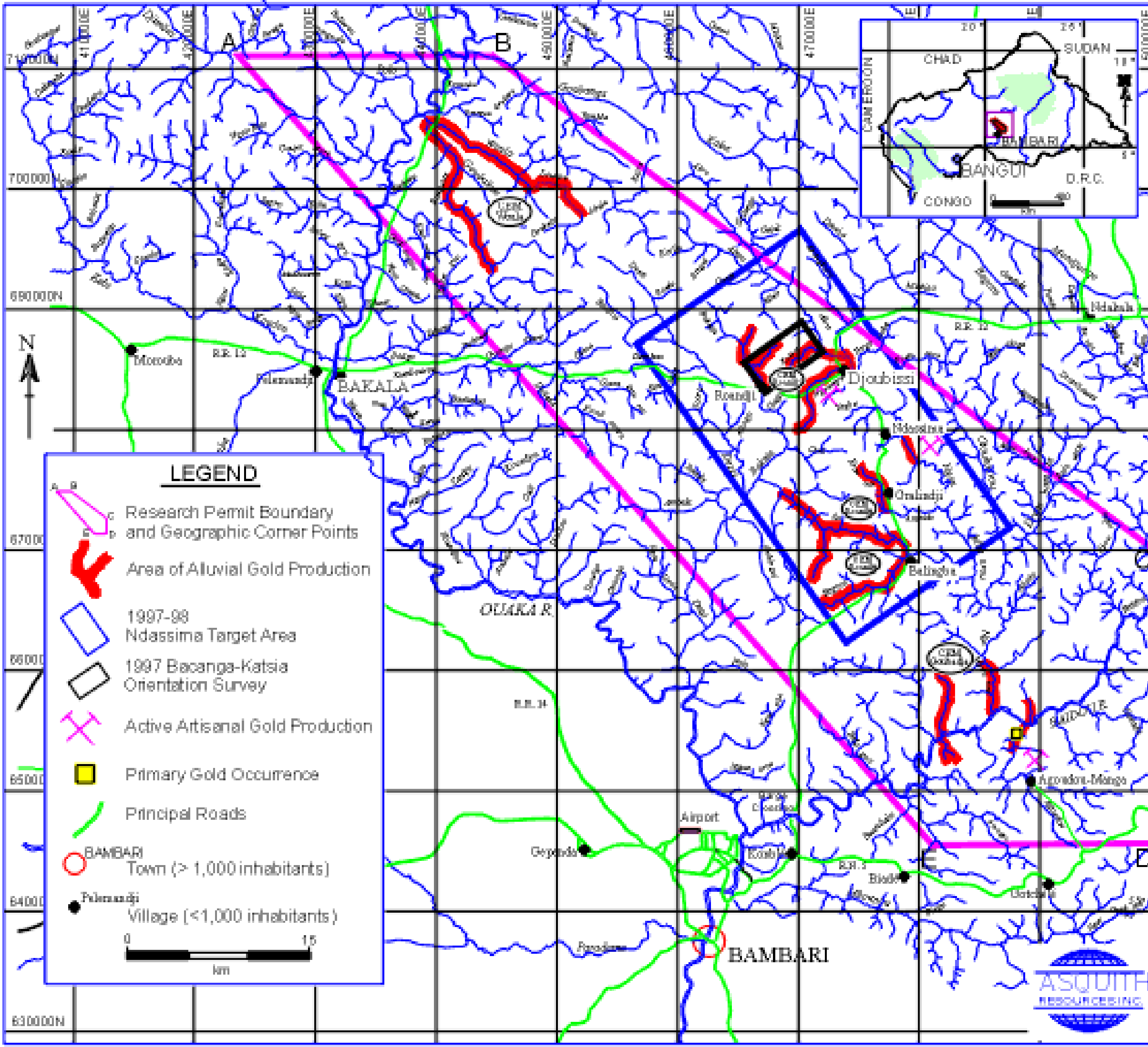


Figure 4-4 Location of the C.E.M.-Roandji mining camps, Roandji permit (source Carré, 1986)



Courtesy of Asquith Resources Inc. A.C.A. Howe International Limited

Figure 4-5. Map of the Roandji property showing the location of the 600 km² Ndassima target area, the Bacanga-Katsia orientation survey area and the rivers and streams mined the Roandji division of the C.E.M.

Table 4-2
Statistics on alluvial gold production, Roandji camp, CEM-Roandji division

Year	River/Stream (original name)	River/Stream (current name)	Average grade g/m^3	Maximum grade g/m^3	Reference*
1929	Bagueta	Bakéda	1.65	5.5	CEM report for 1930
1929	Bacanga	Bacanga	1.8	-	CEM report for 1930
1929	Guetoupou	Nguétépé	-	46	CEM report for 1930
1930	Katsia	Katsia	1.86	-	CEM report for 1931
1931	Barra	-	1.28	-	CEM report for 1932
1932	Goudo	Gouda	1477g nugget		CEM report for 1933

* Source: Carre, 1986

Table 4-3
Yearly gold production figures, CEM-Roandji division

Year	Total gold production (kg) Roandji Division*	Year	Total gold production (kg) Roandji Division*
1929	2.826	1941	59.085
1930	87.74	1942	49.585
1931	246.175	1943	53.644
1932	299.452	1944	-
1933	125.052	1945	28.028
1934	78.312	1946	-
1935	89.929	1947	25.962
1936	68.53	1948	34.451
1937	60.81	1949	15.738
1938	68.192	1950	11.537
1939	60.069	1951	3.383
1940	53.031	Total	1521.531

* Roandji, Woula and Goubadja camps
Source: Carre, 1986

The first systematic program of geological mapping, topographic surveying and mineral resources inventory did not begin in the CAR, however, until 1945, under the auspices of the newly formed *Direction des Mines et de la Géologie* (D.M.G.-A.E.F.) and *the Service Géographique* (S.G.-A.E.F.) of the post-war *Gouvernement Général de l'Afrique Équatoriale Française* (General A.E.F. Government). The S.G.-A.E.F. published a preliminary series of 1:200,000 scale topographic maps (the *croquis-provisoires*) starting in 1950 (Bambari, Bianga and Fort-Sibut sheets; Mobaye, Alindao, Bangassou and Bakouma sheets) which formed the basis for later 1:500,000 scale mapping in south-central and central CAR by Mestraud (1953; Bangassou-Ouest sheet), Foglierini and Mestraud (1958; Bangui-Est sheet), Bessoles (1955; Yalinga-Ouest sheet, Wolff (1963; Yalinga-Est sheet), Pouit (1959a,b;1960; Fort Campel-Ouest sheet) and Scanvic (1956, Fort Campel-Est sheet) (Table 1). The S.G.-A.E.F. also sponsored various area-specific geological investigations, notably a reconnaissance exploration of the Ippy (Cochine, 1947) and Bouar-Baboua areas (Babet, 1948).

The D.M.G.-A.E.F. and S.G.-A.E.F., the two government agencies responsible for mapping in French Equatorial Africa were abolished on June 30, 1959 following the break-up of the A.E.F. into autonomous states. The *Institut Géographique National* (I.G.N.) in France, who up to then had been responsible for performing airphoto surveys, took over all topographic survey work and map production, and published the first revised series of 1:200,000 scale topographic sheets for the CAR, in 1961. The D.M.G.-A.E.F. was replaced briefly by the *Institut Equatorial de Recherches et d'Études Géologiques et Minières* (I.R.G.M.), a new inter-African public research agency. The I.R.G.M. was in turn dissolved on December 31, 1961.

4.3.3 BRGM, ORSTOM AND THE UNIVERSITY OF BANGUI (1961 - 1991)

All active geological investigations by the former D.M.G.-A.E.F. and I.R.G.M. within the 4 countries forming the former A.E.F. (Central African Republic, Chad, Gabon and Congo) were transferred on January 1st 1962 to the *Bureau de Recherches Géologiques et Minières* (B.R.G.M.), a French public agency formed following the demise of the BUMIFOM. The regional mapping program was suspended in 1961, with the last maps covering the CAR published in 1965. In all the program resulted in the publication of 15 out of 20, 1:500,000 scale geological maps covering 65% of the CAR territory, and the production of provisional maps covering a further 20%. The results from the international mapping effort were summarized in a series of preliminary 1:2,000,000 scale compilation maps of the A.E.F. (Nicklès, 1952; Gérard, 1958) and eventually led to the production, in 1964, of a first generalised geological map of the CAR at 1:1,500,000 scale (Mestraud 1964;1982).

Little new regional geological surveys and mineral exploration have been carried out since the end of the reconnaissance mapping program in 1961. After independence in 1960, exploration and mining of mineral resources was by decree restricted exclusively to CAR nationals and gradually the foreign mining companies withdrew. Regional scale exploration-oriented surveying resumed in the mid-1980's when satellite imagery became available. The B.R.G.M. sponsored a structural evaluation of key mineral districts (Delpont and Brosse, 1987) and then implemented a series of follow-up regional stream sediment surveys to test the primary gold potential of past-producing areas, notably the Roandji, Sosso-Polipo and Bouar-Baboua areas

(Guillou et al., 1988). The B.R.G.M. carried out a multiple-media stream sediment survey over a 1,500 km² area that contained all three C.E.M. mining camps (Roandji, Woula and Goubadja). The B.R.G.M.'s regional sampling methodology relied on a sampling density of 1 mineralogical sample and three geochemical samples, per square kilometre. The B.R.G.M.'s strategic geochemical and mineralogical sampling of the Roandji area led to the identification of a 20 km² area south of Djoubissi, containing anomalous Au, As, Cr and Ni values in stream sediment, as well as new alluvial gold occurrences on the Ngou-Mborou river east of Ndassmia, and on the Manga river, north of Agoudou-Manga. The B.R.G.M. outlined a major Cr-Ni geochemical anomaly with associated Au and As over a 20 km² area centred on the village of Ndassima. They attributed the geochemical anomaly to the presence of unmapped ultramafic rocks, and did a short follow-up program over the anomaly in 1989. Results from the 1989 program, which included line cutting, overburden trenching, outcrop stripping and geochemical sampling were not published. The work did lead however to the identification of two new alluvial gold occurrences, which quickly turned into important sites of artisanal mining, the first site located on the west bank of the Ngou-Mbourou River, east of the Ndassima village, and the second site located on the Manga River, north of Agoudou-Manga. The B.R.G.M. abandoned the area the same year after reportedly failing to obtain a research permit for the area. The B.R.G.M. reported a calculated grade of 9.32 g/t gold from the washing of a sample of eluvium from the Gouda Stream (Guillou et al., 1988). A BIF bedrock sample from the same stream, yielded 1.45 g/t Au, the second highest rock assay of the entire regional geochemical sampling programs.

The period 1975 to 1990 also saw several re-interpretations of the original geology of the CAR by University of Bangui, B.R.G.M. and ORSTOM geoscientists on the basis of detailed field mapping and new lithogeochemical and mineralogical data (Poidevin *et al*., 1981; Boulvert, 1983; Dostal *et al*., 1984; Hottin, 1988; Cornacchia and Giorgi, 1989, 1990; Carré *et al*., 1989; Censier, 1991; Poidevin, 1991), new satellite imagery (Boulvert and Poidevin, 1977; 1973; Labrousse, 1978) and new geochronological data (Bessoles and Lasserre, 1979; Bessoles and Trompettes, 1980; Pin and Poidevin, 1987; Lavreau *et al*., 1980, 1990). The three organisations have made a significant contribution to the understanding of the stratigraphic position, relative age and structural deformation of the rocks and surficial sediments forming the CAR portion of the African craton, and have provided a revised framework for mineral exploration, in particular diamonds and gold. Noteworthy are the identification and detailed geochemical study of three major Archean greenstone belts (Bandas, Bogoin-Boali and Boufoyo-Dekoa; Poidevin, 1977, 1979, 1985, 1991,1994; Poidevin *et al*., 1981; Biandja, 1988), the production of a 1:1,000,00 scale litho-structural map of the CAR based on the study of Landsat-I and II images (Labrousse, 1978), the production of a 1:1,000,000 scale pedogeological map of the CAR (Boulvert, 1983), and a synopsis of the geology of the diamondiferous Phanerozoic sedimentary formations (Censier, 1991).

4.4 EXPLORATION BY ASQUITH RESOURCES INC (1996-1999)

4.4.1 Ndassima Target Area Phase 1 (Level 1) Exploration Program

In 1997, Asquith conducted a regional, high sample density and multi-media stream sediment survey, which, was designed to evaluate the mineral potential of a 600 km² area located in the east-central portion of the Roandji property. This area contained C.E.M.'s Roandji gold mining zone that was the main of three zones of alluvial gold production (Figure 4-5).

The area straddles the drainage divide between two south-flowing second-order tributaries of the Ouaka River, the Bakéta River in the West and the Ngou-Mbourou River in the East. The Ndassima target area included three of the five original priority targets identified by Asquith in 1996, namely Roandji, Passendro, and Ndassima. The two first targets refer to alluvial areas mined by the C.E.M., while the third area corresponds to the Ndassima Chantier, the principal site of active artisanal gold mining in the permit area. The small placer occurrence is located on the west bank of the Ngou-Mbourou River. The objectives of Asquith's Ndassima regional stream survey were to: 1) confirm and document the reported C.E.M.-Roandji gold occurrences and 2) characterize and rank, using mineralogical and/or geochemical criteria, the gold potential of the individual streams and rivers which collectively make up the Roandji alluvial gold mining zone. The survey was carried-out from October 4, 1997 to May 8, 1998. The sampling method used was the systematic sampling of all active waterways at an interval of 100 metres. Two types of stream sediment samples were collected at each site, a bulk sand sample for heavy mineral separation, mineralogical studies and gold particle abundance determinations, and a fine fraction sample for Au and multi-element geochemical analysis. The bulk sand samples were collected by wet screening coarse sand and gravel from the active stream channel to obtain 20 litres of –1.7 mm material. The geochemical samples were collected by further wet screening of coarse sand and gravel from the active stream channel to obtain 4 litres of –1.7 mm material from which the -63 µm size fraction was later extracted for geochemical analysis. At every 19^{th} or 20^{th} sample site, field duplicates of both the bulk 20 litre mineralogical samples and the 4 litre geochemical samples were collected to measure sample-site variability and monitor quality control. Where bedrock outcropped along or adjacent to the streams being sampled, rock samples were collected for identification and Au analysis.

A total of 2,179 alluvial sites were sampled within the 600km² survey area. 2076 of the samples yielded heavy mineral concentrates. Particulate gold was detected in 1,827 of the 2,040 samples processed. A total of 111 fine fraction (-63 µm) samples from the Lachimi, Bacanga, and Katsia streams (including field and split duplicates) were forwarded to Chemex Laboratories and XRAL laboratories in Canada for geochemical analysis. The samples were analysed for Au and multi-elements using XRAL's code NA-BAS Instrumental Neutron Activation Analysis (INAA) procedure, and for selected major and trace elements using Chemex' code G-32 Inductively Coupled Plasma-Atomic Emission Spectroscopy (ICP-AES) analytical package.

On the basis of the gold particle abundance, three strategic areas were then identified by Asquith within the 600km² Ndassima survey area: 1) The first of these areas forms a 64 km² square lying north of Passendro and west of Djoubissi. The "Passendro" strategic area is host to six of the top nine most auriferous streams in the 600 km² survey area, and includes large portions of the two most auriferous rivers, the Bakéda River in the West and the Nguétépé River in the South-East. The Passendro area straddles a major drainage divide and is underlain by BIF, quartzite, and metavolcanics in the West, and granite in the East and Southwest. The second strategic area forms a 40km² block lying west of Ndassima. The "Yagba River" strategic area contained four new alluvial gold occurrences outlined by the regional stream sediment survey. The four auriferous streams are related to East-flowing tributaries of the Ngou-Mbourou River and flow from a height of land supported by BIF and/or quartzite with intercalated metavolcanics or metavolcanics in close proximity. The third strategic area is centred on the Agbea and Ngounbalé alluvial gold occurrences and covers the majority of the Ao and Bagoro river sections mined by the C.E.M. The "Balingba" strategic area covers roughly 100km² of terrain underlain by metavolcanics, BIF, quartzite, and surrounded by granitoid rocks.

A total of 105 geochemical samples, representing 99, 100 metre-spaced sample centres on the Bacanga, Katsia and Lachimi streams, and a further six 50 metre-spaced sample sites on the Bacanga stream, were tested for 34 elements using INAA and 32 elements using ICP-AES. The gold content for the 105 stream sediment samples assayed ranged from <5 ppb Au to a maximum of 5,600 ppb Au in sample 98-NDG-047 collected on the Bacanga Stream at a sampling distance of 2.15 km from the Bakéda River confluence. Of the 105 samples assayed, 10 samples returned assay values greater than 1 g/t Au, and all were located on the Bacanga Stream.

4.4.2 Ndassima Target Area Phase 2 (Level 2) Exploration Program

In 1996, Asquith contracted World Geoscience Group to carry-out an airborne magnetic and radiometric survey over the Roandji Property. The airborne survey, totalling 9,500 line kilometres was flown on N-S trending flight lines spaced at 200 to 300m with tie lines flown at 2,000 metre intervals. Flight height / sensor elevation was at 80 metres above ground.

To assist in the field mapping and structural interpretation of the Passendro strategic area, Asquith commissioned Stratagex Ltd. of Toronto, Canada in 1996 to carry out an interpretation of the airborne magnetic and radiometric survey over the Roandji Property area. Results of the airborne geophysical survey were then plotted onto a series of 1:20,000 scale colour-contoured geophysical maps. The maps generated by Stratagex included the standard radiometrics (total count, potassium, thorium and uranium) and magnetic products (total magnetic intensity (TMI), reduced to the equator TMI, calculated first vertical gradient, and calculated first vertical derivative of the reduced to the equator TMI) and a digital elevation model (DEM). The geophysical maps were plotted onto a digitized version of the 1:200:000 scale Bakala (NB-34-XV) topographic map. A series of adjustments were required to the digital topographic base, namely a generalized translation of 250 metres to the North and 50 metres to the East, and some localized stretching, to ensure a proper match of the drainage lines and existing road network with the geophysical features. The DEM was used as a base for the calibration of the digital base map. The magnetic map products were plotted with colours reversed, to correct for the problem of the reflection of magnetic sources by magnetic lows at or near the equator.

4.4.2.1 Structural Analysis

A preliminary structural analysis of the Passendro strategic area was completed by Buro (1998) (Figure 4-6). Buro (1998) interpreted the tightly folded banded iron formations (BIF) which dominate the Passendro strategic area and support the height of land, to be arranged as a series of bands defining the lower portion of a large, NW-trending F1 fold. Buro (1998) also interpreted a series of F2 folds are superimposed onto the F1 fold. The arcuate nature of the trace of the F1 fold axial plane was interpreted by Buro (1998) to originate from deformation related to the late emplacement of the Djoubissi granite to the east, rather than from a third (F3) phase of folding which has been recognized elsewhere over the permit area.

4.4.2.2 Surface Geological Mapping and Sampling Program

The "Passendro" grid was designed by Asquith to cover the six auriferous streams as well as large sections of the two auriferous rivers that define the 64 km² high priority area (Figure 4-7). The original grid design, called for a 64 km^2 square grid (8km by 8 km) with a baseline oriented at 325° and 200 metre spaced 8 km long cross-lines and a set of 1 km-spaced control tie-lines on either side of the base line (Figure 4-7).

The topography of the Passendro grid area consists of a central banded iron formation (BIF)-supported upland flanked to the East and Southwest by granite-underlain lowlands, and to the West by lower relief quartzite terrain. The upland surface displays a prominent ridge and depression topography marked by narrow (100 x 300m wide) NW-trending ridges separated by shallow (<25 m relief) depressions. The single most prominent feature of the survey area is a 400 m to 1600 m-wide, steep-sided and relatively flat top ridge which forms the drainage divide between the Bakéda River in the West and the Akro River in the East, as well as the drainage divide of the Dessi River system in the West and the Baidou River system in the East (both first order tributaries of the Ouaka River). The ridge peaks at an elevation of approximately 690 m a.s.l.. This peak, located on an 800 m-wide portion of the ridge, between the Bacanga and Learo streams, represents one of the highest points in the Roandji permit area. The height of land feature extends northwest past Line 80N, where it widens to a maximum width of 1.6 km, before ending abruptly at the Apoutou Stream, a right-bank tributary of the Bakéda River. The only other landform feature to pass the 680 m elevation mark is a 2.8 km-long N-trending ridge between the Mbio and Akro rivers. The lowest point in the Passendro survey area is located at the East end of the Nguétépé River, at an approximate elevation of 475 m a.s.l. The maximum relief for the Passendro strategic area is 205 m.

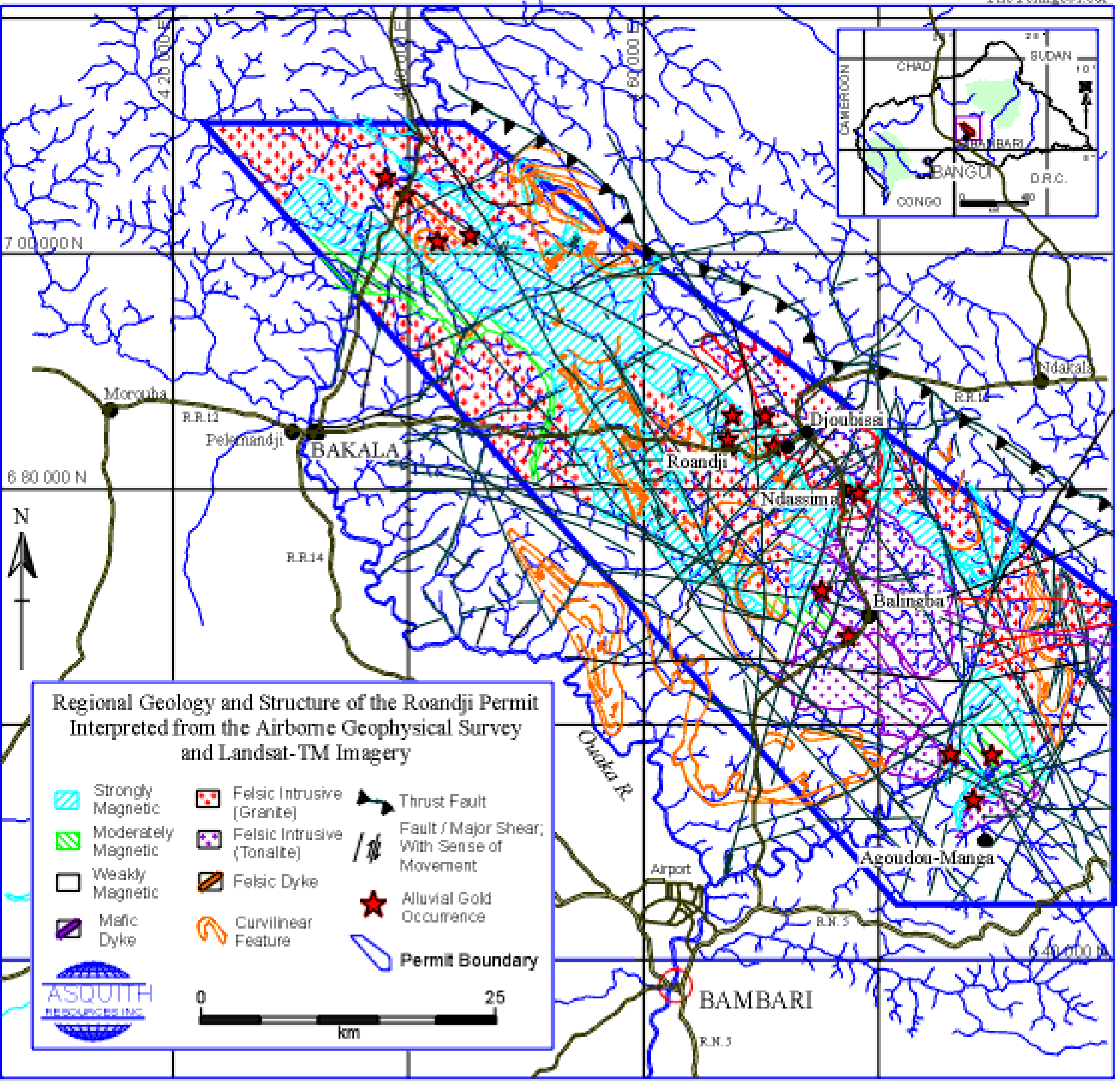
Outcrop exposure in the Passendro grid area is less than 1%, and is mostly confined to the floors and walls of the steep-sided stream valleys crossing the regional structural trend and to the edges of the steep-sided ridges that follow the regional structure. A mantle of thick and extensive duricrust and colluvium covers the flat and gently sloping portions of the survey area. It is derived from the repeated consolidation of the colluvium and mechanical disintegration and slope transport of both the duricrust and the bedrock. The edges of the plateaux and the steeper bedrock ridges are lined by boulders of iron-duricrust derived from the dismantling of pre-existing duricrust surfaces. Angular bedrock cobbles also line the walls of the ridges and of the stream valleys, often providing the only clue to composition of the underlying bedrock. Recent alluvium form relatively narrow terraces (< 150 m wide) on both sides of the main river valleys (Bakéda, Nguétépé, Akro and Mbio) and occasionally line the edges of some of the major streams (Bacanga, lower Katsia). Organic deposits occupy depressions and oxbows on the lower gradient portions of the various drainage lines, forming a particularly extensive tract along the Bacanga Stream, between stations 2300W and 1300W. Residual "lag" deposits of deflation and/or sheet wash origin accumulate at the edges of individual duricrust sheets, or in recesses on their surface.

Eight basic rock units were recognized by Asquith in their surficial geological mapping program (Figure 4-8). The two dominant types are silica-rich (SiFIF) and oxide-rich (OFIF) banded iron formation (BIF). The two BIF units underlie the majority of the height of land across the grid area, and account for the moderate topography to the west of the Bakéda River. The oxide-rich BIF can be further subdivided into magnetic and non-magnetic units in the field, although the magnetic character of the rock appears to be more reflective of the degree of chemical weathering of the magnetite, rather than its original content in the rock. Both magnetic and non-magnetic units are characterized by a predominance of layers containing a high content of hematite and/or specularite, with varying concentrations of magnetite and goethite. The oxide-rich layers are interbedded with bands of recrystallised quartz or chert containing iron amphiboles. The silica-rich BIF units are essentially comprised of laminated to massive ferruginous to high silica quartzite. The quartz occurs predominantly in granoblastic forms. The red staining is caused by the occurrence of disseminated hematite and goethite.

Microcrystalline quartz occupies fracture planes and fills depressions left by the weathering of oxide or sulphide minerals. Pyrite stringers and moulds of cubic pyrite have been observed in silica-rich BIF float near the Bacanga Stream. Both BIF units show intense folding at outcrop scale, displaying tight to isoclinal and refolded fold patterns.

East of the main drainage divide, the Djoubissi granite forms a large area of low relief, and a major K high anomaly on the airborne radiometric survey. The essentially unmineralised granite outcrops along the main drainage lines, and occasionally as knobby or whaleback forms on higher ground. A quartz-sericite schist unit appears to mark the western limit of the intrusive. A unit of specularite schist also occurs near the contact. The southwest portion of the grid area includes mafic to ultramafic metavolcanic units, observed on the Gouda Stream (and principally interpreted from the strong Cr-Ni, V and base metal signatures provided by the Company's stream sediment and termitaria geochemical surveys).

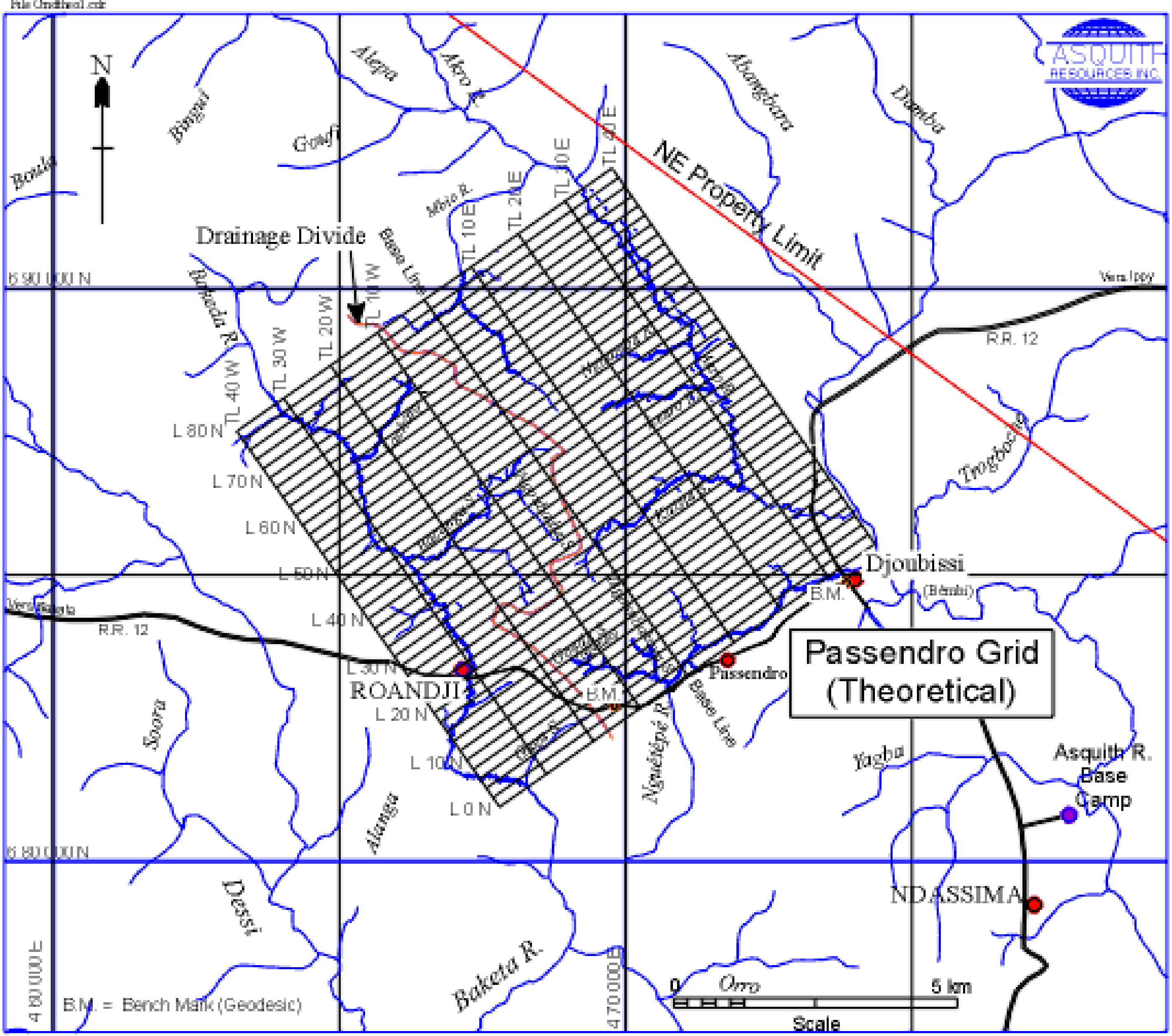
Asquith's field mapping also identified a N-NW-trending quartz-specularite-magnetite schist that crosses the silica-rich BIF (see Figure 4-8), and possibly represents a major zone of deformation. This schist converges to a quartz-sericite schist along part of the western contact of the Djoubissi granite with the BIF. Buro (1998) had suggested that the quartz-sericite schist is probably derived from the recrystallization of a felsic dike associated with the Djoubissi granite. Kinematic indicators recorded on this schist suggest a shear with a dominant oblique movement (normal and sinistral) plunging 55° to the Southwest. Weaker lineations indicate a dextral movement along a 30° line to the southwest.



Courtesy of Asquith Resources Inc.

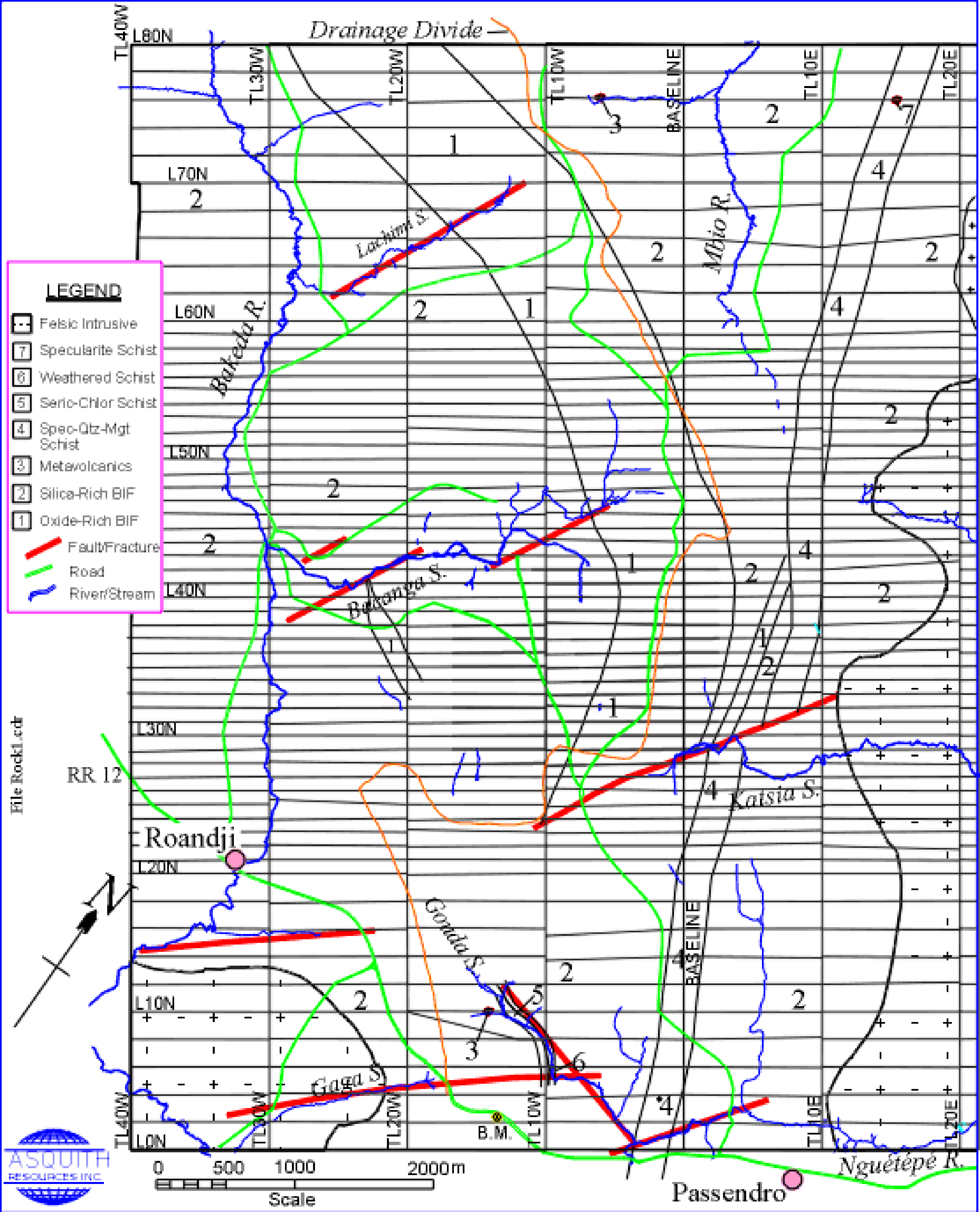
A.C.A. Howe International Limited

Figure 4-6. Structural and magnetic interpretation of the Roandji property (modified from Buro, 1998)



Courtesy of Asquith Resources Inc. A.C.A. Howe International Limited

Figure 4-7. Original design (1997) of the Passendro survey grid, Passendro strategic area, Roandji Project



Courtesy of Asquith Resources Inc. A.C.A. Howe International Limited

Figure 4-8. Bedrock geology of the Passendro grid compiled from the 1:2,500 scale surficial mapping, 1998 Passendro strategic area exploration program, Roandji Project

4.4.2.3 Termitaria Sampling Program

5,663 termitaria mounds were sampled by Asquith over the westernmost 40 km^2 of the Passendro grid. The Passendro grid termitaria survey began on April 29, 1998 and was completed on August 25, 1998.

The sampling interval was on 100 m-spaced grid lines and consisted of a regular 750 ml sample for Au and multi-element geochemical analysis and a bulk (unscreened) 20 litre sample for heavy mineral separation and gold particle abundance determination.

Each of the cathedral termitaria were cleaned of vegetation and debris and then sampled by collecting 20 litres of material from the bottom of a trench excavated on the mound. The trench was excavated along a radius line (from the top of the mound toward the base), to a minimum depth of 10 cm and over a minimum distance of 2 m. In the case of small (< 1.5 m high), inactive and/or collapsed mounds, the sampling often extended across the mound apron, and in some cases, into the surrounding soil. The 750 ml geochemical samples were collected by chip sampling the bottom of the radius-line trench on each mound, following the collection of the 20 litre sample. At every 19th or 20th sampling site, field duplicate samples (20 litre and 750 ml) were collected from a second radius-line trench excavated on the mound. The field duplicate samples were collected primarily to determine sample-site variability but also to monitor quality control at the sample processing (field panning and geochemical sample preparation) and analytical stages. The mound width, height and grain size, and the presence/absence of termites were recorded at each site. Of the 5,663 termitaria samples tested for particle gold, 1,850 termitaria (750 ml samples) were analyzed for Au and a multi-element package.

A suite of 168 samples from an earlier recognized anomalous trend, were subsequently subjected to screen or "metallics" assaying. The procedure allowed for the determination of the Au content for both the -150 µm and +150 µm size fractions. Gold particle abundance for the 5,663 bulk 20 litre termitaria samples ranged from 0 to a maximum of 6,743 for sample 98-NDTH-4174. Particulate gold was detected in 4,849 of the 5,663 samples processed.

Four anomalous gold particle trends were identified by the termitaria survey (Figure 4-9):

1. A main 5.5 km-long, 200-500 m wide NW-trending (300°) anomaly, confined by the baseline in the East and tie line 30W in the West, and by grid lines 8N in the South and 64N in the North;

2. A lesser parallel trend, located 1.5 km to the Southwest, and bounded by tie line 20W in the East, the Bakéda River in the West, the Bacanga Stream in the North and Line 28N in the South;

3. A third gold particle trend associated with the Bacanga Stream, including its highly auriferous Ngoubadja tributary, and;

4. A small localized anomaly at the Southeast limit of the grid, in the vicinity of the geodesic benchmark.

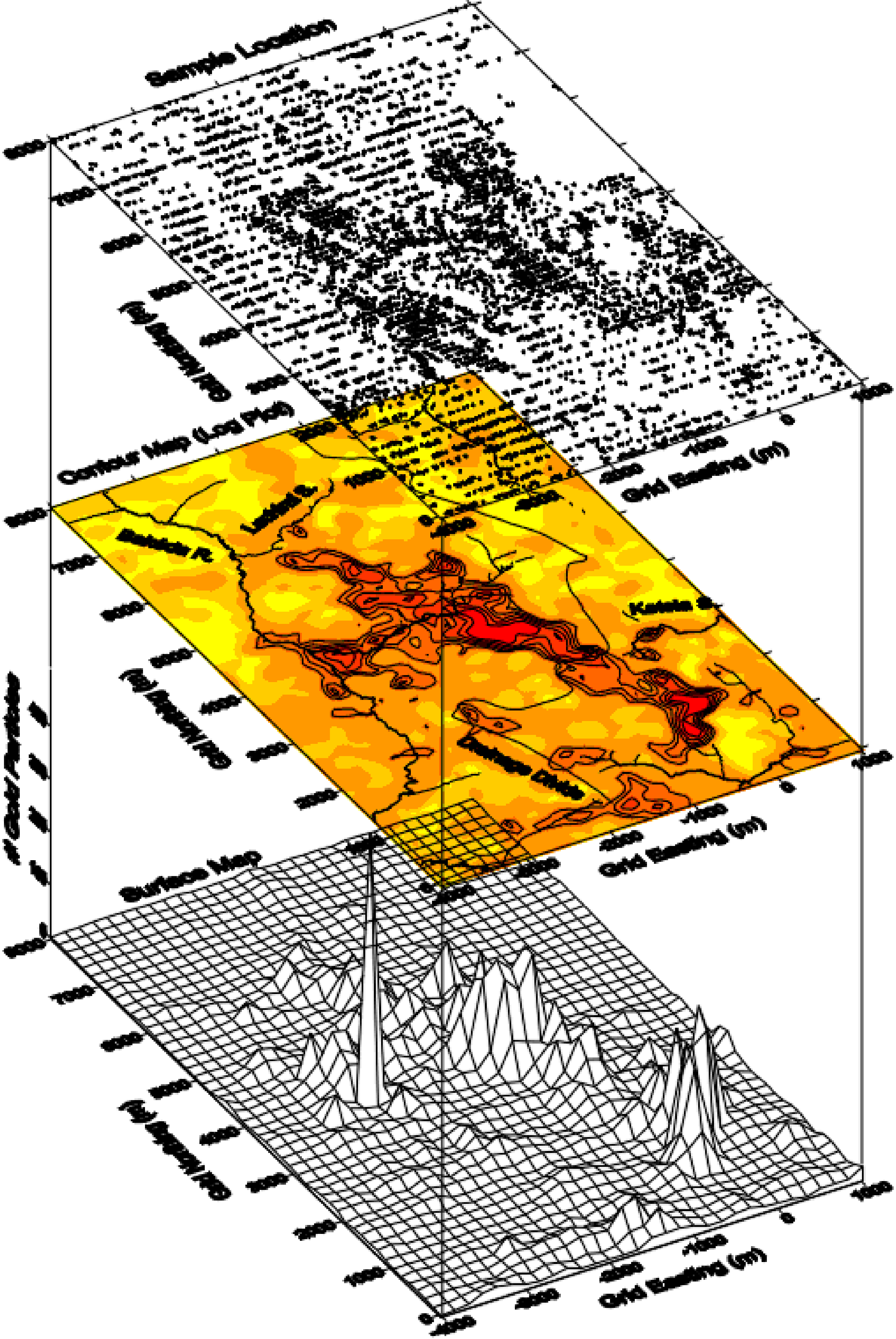


Figure 4-9. Contoured and continuous surface plots of gold particle abundance in cathedral termitaria, 1998 Passendro grid termitaria mineralogical and geochemical survey, Roandji Property.

Courtesy of Asquith Resources Inc. A.C.A. Howe International Limited

Gold values for the 1,850 bulk termitaria samples analysed range from <1 ppb Au to a maximum of 4,700 ppb Au in sample 98-NTDG-2036. Seven samples out of the 1,850 samples analysed returned values greater than 1 g/t Au and a total of 192 samples returned gold analyses below the laboratory's 5 ppb Au lower detection limit. Three of the four termitaria gold anomalies identified by the gold particle survey have been clearly reproduced by the conventional geochemical gold survey. The only gold particle anomaly not fully reproduced by the conventional geochemical survey is the minor NW-trending anomaly.

Total Au values for the 168 bulk termitaria samples analysed by metallic screen analysis range from less than 0.07 g/t to a maximum of 2.07 g/t. One half of the samples registered Total Au values above the 0.25 g/t mark. Au values for the +150 µm size fraction range from 0.03 g/t to a maximum of 12.60 g/t. Au values for the -150 µm size fraction range from less than 0.07 g/t to a maximum of 0.9 g/t.

A total of 2,026 geochemical samples, representing 1,850 termitaria sampling sites (plus 92 field duplicates and 84 split duplicates) were analysed for 32 elements.

4.4.2.4 Passendro Grid area

4.4.2.4.1 Soil and Lag Soil Sampling Program

The Passendro grid conventional soil survey was performed between May 5 and June 18, 1998. The sampling was conducted at 50 m intervals, along each of the 200m-spaced grid lines, by collecting 750 ml of A-horizon soil from a depth range of 10-40 cm. A total of 5327 soil samples were collected during the survey.

The soil survey was followed up by a lag deposit sampling program targeting all sites along the 200 m-spaced grid lines where a soil sample could not be collected because of the presence of duricrust or bedrock at surface. The sampling was performed by collecting 4 litres of residual granule-pebble gravel swept from a $1m^2$ area on flat duricrust or bedrock surfaces or accumulated in depressions or at the edges of duricrust sheets or bedrock outcrops. A total of 891 lag deposit samples were collected.

A first series of 514 soil samples were analyzed for Au and a multi-element package. The 4-litre lag deposit samples were wet-screened to recover the 2 mm to 10 mm size fraction. The resulting size-fraction samples were air-dried and then re-sampled to obtain a final 750 ml sample. None of the lag samples were analyzed. Asquith subsequently archived all of the sample media, however, in 2000 AXMIN carried out a soil sample investigation of the archived material. AXMIN's results are discussed in detail in Section 4.5.2.3.2

4.4.2.4.2 Bedrock and Trenching Sampling Program

Bedrock Sampling Program

Asquith collected a total of 303 bedrock chip and / or channel samples from August 1997 to

October 1998 within the Passendro Grid area. According to Asquith, 80% of the samples collected were of BIF material while the remainder was composed of granite, quartz veins in granite, schist and metavolcanics. Auriferous sample values from the various bedrock material ranged from < 5ppb Au to 58.87 g/t Au (sample number 980039).

Based on this sampling program, Asquith outlined three areas of interest (Figure 4-10):

Area 1:

Lines 45N and 47N two anomalous Au channel sample intersections at:

(a) L45+13N / 12+79W where three channel samples (samples N680025 1010ppb Au over 5.0m, N680026 1210ppb Au over 4.50m and N680027 1200ppb Au over 3.0m) of a silicified BIF unit with minor pyrite averaged 1140ppb Au over 12.5m and;

(b) L47+00N / 13+25W where four channel samples (samples N680028 120ppb Au over 5.0m, N680029 450ppb Au over 5.0m, N680030 1130ppb Au over 5.0m and N680031 215ppb Au over 3.0m) of a silicified BIF unit averaged 479ppb Au over 18.0m.

Area 2:

(a) L3+77N / 15+76W whereone 7.0m long chip sample of oxide facies BIF returned a gold value of 2460ppb Au over 7.0m, and 1460ppb Au over 13.2 m, and;

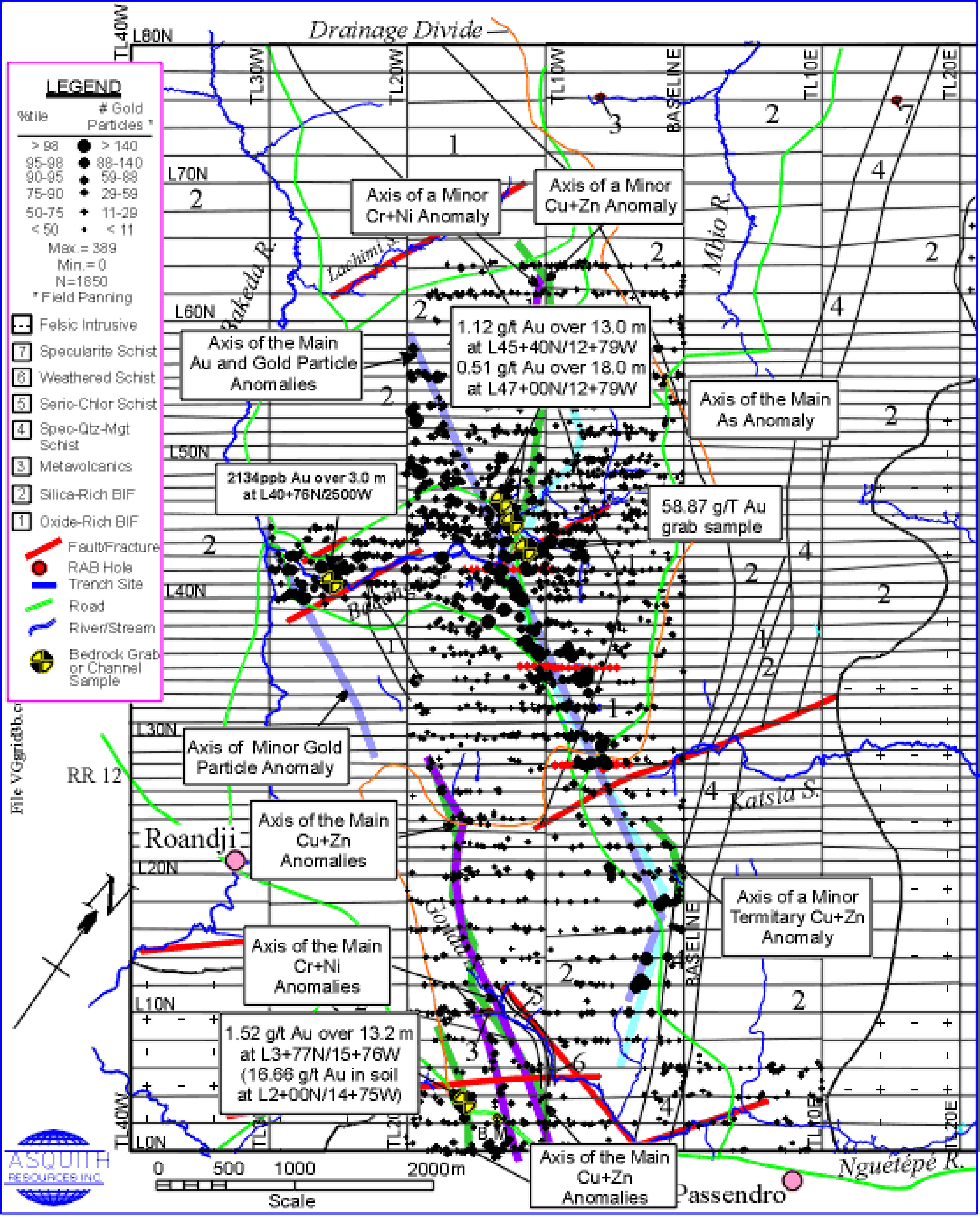
Area 3:

(a) L40+76N / 25+00W an outcrop of strongly folded, quartz-rich silicate BIF returned an auriferous chip sample interval of 2134ppb Au over 3.0m. Sample numbers are: 900051, 1100ppb Au over 0.50m; 900052, 1760ppb Au over 0.50m; 900053, 2970ppb Au over 0.50m, 900054, 1080ppb;Au over 0.50m; 900055, 4060ppb Au over 0.50m, and 900056, 1100ppb Au over 0.50m.

Sample 980039, which assayed 58.87 g/t Au was a grab sample collected from an outcrop of silica facies BIF located at L44+40N / 12+70W. The anomalous unit is spatially related to an interpreted NE trending fault / fracture (see Figure 4-10).

Trenching Program

A review of the termitaria and bedrock sampling program results by Asquith indicated that several zones (i.e.; between L 26N and L 42N) within the Passendro Grid Area warranted further exploration work. Due to these results, Asquith therefore designed a trenching program in order to test and determine the gold potential of the auriferous termitaria sample site areas as well as the auriferous bedrock sample site areas along strike and at depth. A total of nine trenches totalling 382 m were manually excavated whereby the depth of each trench averaged 3.0m and the width is



Courtesy of Asquith Resources Inc. A.C.A. Howe International Limited

Figure 4-10. Summary of best Au assays from bedrock chip and channel sampling shown over a Proportional circle plot of gold particle abundance in termitaria, Passendro strategic area, Roandji property

2.5 m. The nine trenches were mapped on either trench wall (north or south facing) and horizontal samples were collected at 1m intervals. Sampling procedures consisted of taking both a 20 litre and 4 litre bulk samples collected for mineralogical and geochemical analysis respectively. As well, Asquith also collected one vertical sample for each trench with bulk 20 litre mineralogical samples collected at 0.50 m intervals and 4 litre geochemical samples collected at 0.20m intervals. A total of 375 mineralogical samples and 268 geochemical samples of saprolite / laterite and colluvium material were collected and sent to Asquith's on-site processing facility. The trench sample processing carried out at Asquith's on-site facility was as follows:

- The 20 litre samples were panned to a concentrate to allow for the visible determination of gold particle counts / abundance;
- The 4 litre geochemical samples were coned and quartered to produce a representative 750 ml sample, which were then forwarded to Aurafrique's lab in Bangui;
- The samples were packaged and shipped (unprocessed) to Chemex Laboratories in Canada;
- All 268 geochemical samples were assayed for Au using Chemex's Code 983 FA-AAS analytical procedure and;
- The vertical samples were assayed for Au as well as analysed for multi-elements using Chemex's Code G-32 ICP-AES analytical procedure.

Although horizontal channel samples were collected, Asquith only analysed every second sample from each trench.

Of the 268 samples collected from the nine trenches, only Trench TR-98-36N (W) returned a significant mineralized interval > 1.0 g/t Au (1.099 g/t Au over 23.0 m) in what Asquith described as the lower colluvium unit containing specularite/hematite BIF (75%) as well as angular boulders of quartz-BIF breccia derived from shearing (Figure 4-11). The remaining trenches all returned values < 1.0 g/t Au (see Table 4-4).

4.4.3 Ndassima Target Area Phase 3 (Level 3) Exploration Program

4.4.3.1 Passendro Percussion Drilling Program

A 60 hole (832 m) rotary air blast ("RAB") percussion drill program was completed on the Passendro grid in the period September 25 to October 20, 1998. The overburden drilling tested a 1.4 km strike length of the main 5.5 km long termitaria mineralogical and geochemical gold anomaly identified by Asquith (Figure 4-12).

The initial RAB hole spacing along each drill fence was 50 m and each hole was drilled vertically (-90°). Follow-up infill drilling at 25 m spacing was performed where elevated

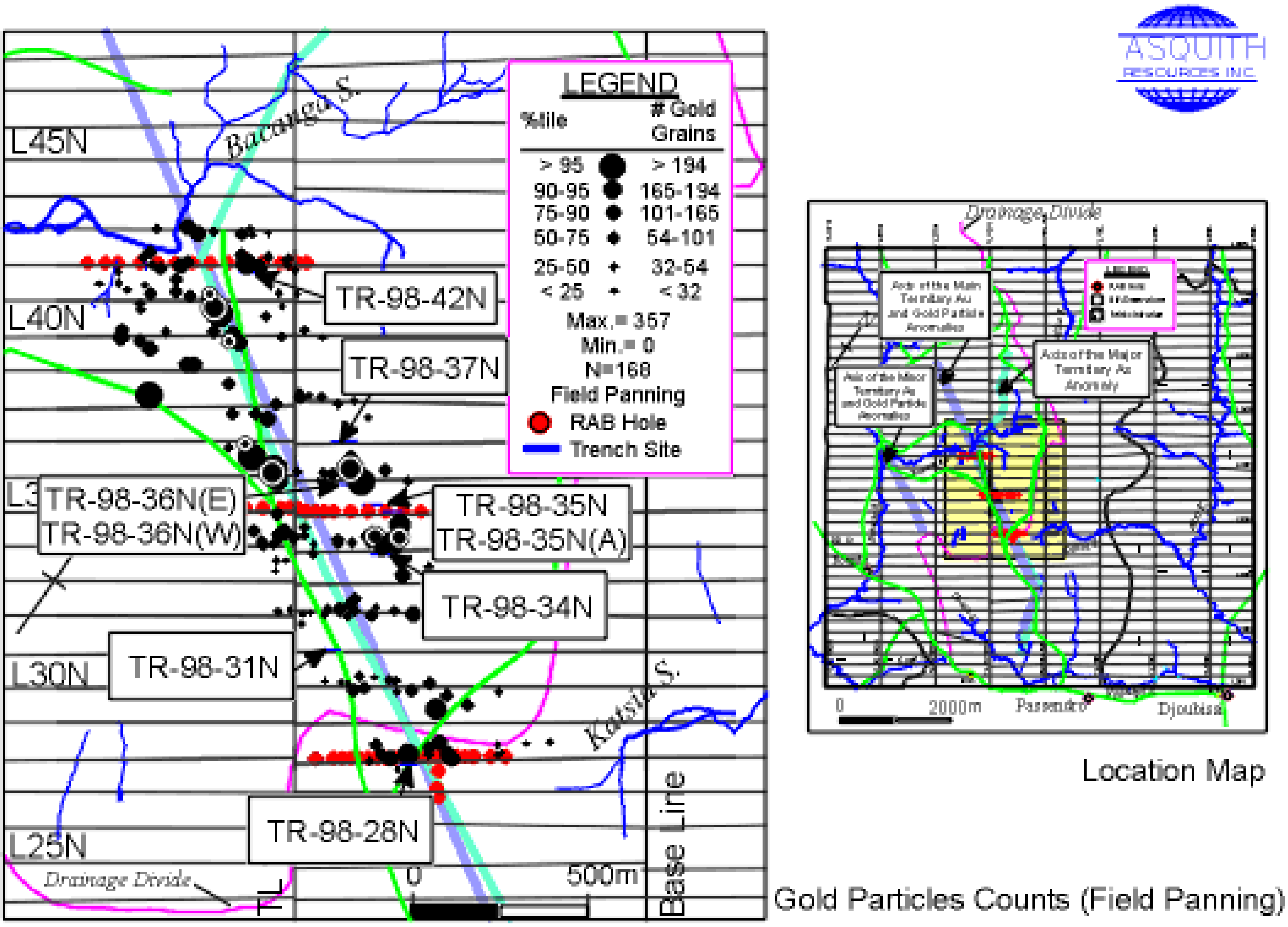
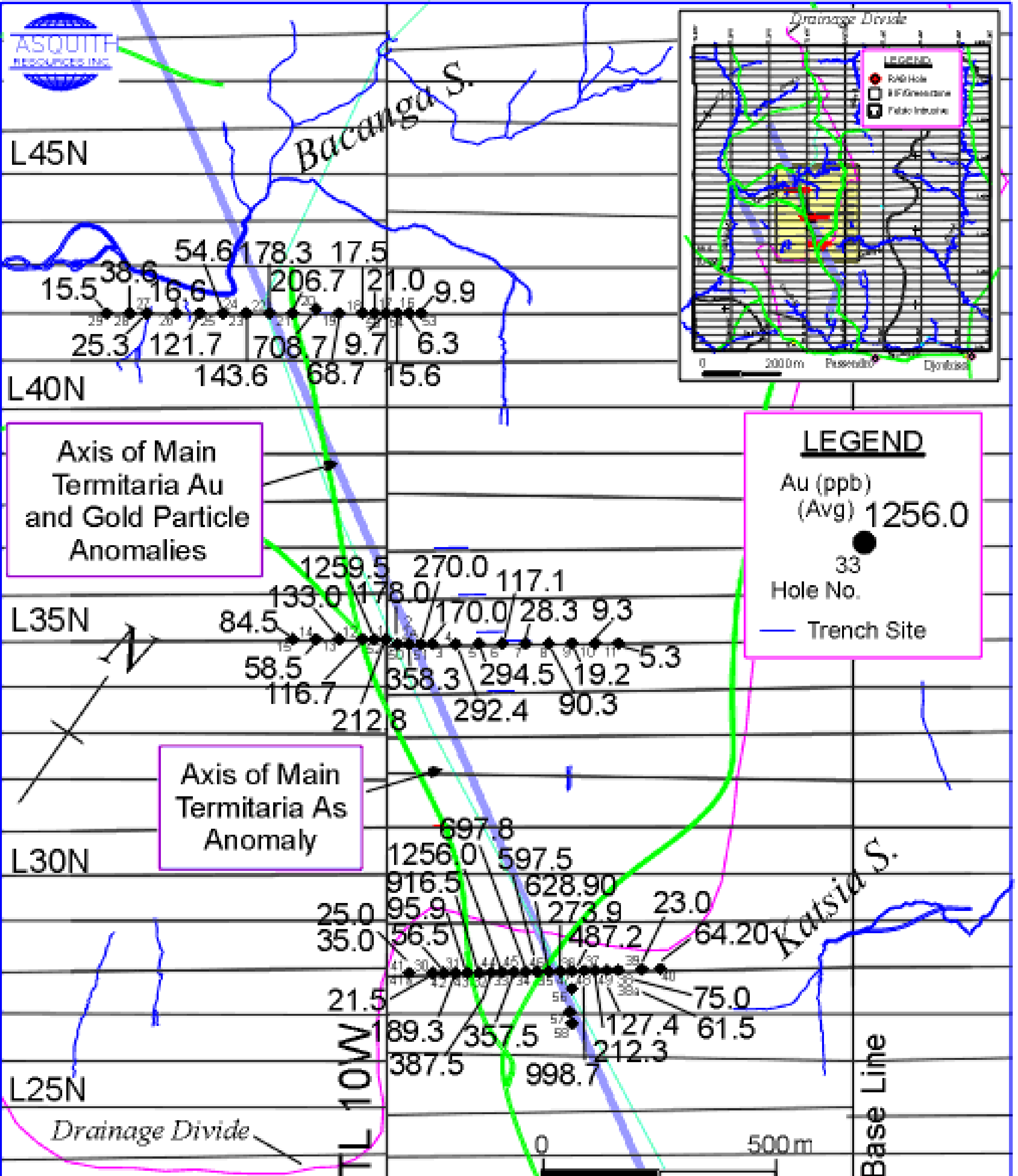


Figure 4-11. Location of the Passendro grid trenches shown with a proportional circle plot of gold particle abundance in 168 termitaria samples from the line 27N to Line 43N section of the main gold anomaly, 1998 Passendro strategic area, Roandji property

Table 4-4 Summary of overburden trenching results, Passendro grid.

Trench No.	Trench Location	Trench Length (m)	Maximum Depth (m)	Average Gold Particle Count	Minimum Average Au (ppb) (alternate 1 m samples not analysed assigned 0 ppb)
28N	6+75W to 7+04W	29	3.0	63 over 17m	111 ppb over 17m
31N	8+75W to 9+00W	25	4.1	27 over 22m	136 ppb over 22m
34N	7+34W to 7+75W	41	3.2	79 over 28m	145 ppb over 28m
35N	7+03W to 7+57W	54	2.1	99 over 36m	117 ppb over 36m
35N(A)	7+60W to 8+20W	60	2.3	93 over 61m	159 ppb over 61m
36N (E)	7+90W to 8+11W	21	3.1	77 over 19m	135 ppb over 19m
36N (W)	8+16W to 8+42W	26	3.2	317 over 23m	1099 ppb over 23m
37N	8+18W to 8+93W	75	3.3	77 over 75m	253 ppb over 75m
42N	11+03W to 11+54W	51	3.2	46 over 44m	234 ppb over 44m

Courtesy of Asquith Resources Inc.



Courtesy of Asquith Resources Inc. A.C.A. Howe International Limited

Figure 4-12. Location of the Passendro grid RAB percussion drill holes with weighted average Au (ppb) per hole, Passendro strategic area, Roandji Property gold particle counts were recorded in the original holes. One follow-up percussion drill hole (L35N/948W) was a duplicate, extended to a depth of 16.5 m to verify an anomalous gold particle count recorded in the bottom 1.5 m section of the original hole. Two holes (L28N/950W; L28N/500W) were re-drilled following aborted first attempts. Forty-four (44) of the vertical drill holes reached the intended maximum drilling depth of 15 m.

Sampling of RAB drill cuttings was performed at 1.5 m intervals (on average) down each hole. Two samples were collected, a 20-litre sample for mineralogical processing and gold particle count, and a 4-liter sample for geochemical analysis. A total of 471 mineralogical samples and 466 geochemical samples were collected. A total of 529 samples were assayed for Au including a suite of 63 split duplicates, prepared at the field processing stage to measure sample variability.

Four basic stratigraphic units have been identified by the RAB drilling: (1) a thin (< 1m) discontinuous silt and organic-rich soil cover (mapped as latosol), (2) a surficial colluvium unit, (3) a surficial to buried unit of ferricrete (iron-duricrust), and (4) a lower saprolite unit.

Gold particle abundance for the 471 bulk 20-litre samples collected ranged from 0 to a maximum of 1232. Particulate gold was detected in 458 of the 471 samples processed. Anomalous gold particle trends are observed in both transported and residual eluvium along all three fences of holes, and in all but one case (L42N/1000W) directly underlie the original termitaria anomaly. Trends of high gold particle counts in interpreted saprolite yielded a 300 m wide anomaly on Line 28N between 550W and 850W, a 100 m-wide anomaly on Line 35N between 925W and 1025W, and a site-specific anomaly on Line 42N at 1000W. Au values for 466 geochemical samples analysed to date range from <5 ppb to a maximum of 4840 ppb. Two hundred and six (206) of the total 466 samples assayed returned values in excess of 100 ppb Au with 34 of those registering above the 1 g/t Au mark. Trends of high Au values in interpreted saprolite resulted in a 225 m wide anomaly on Line 28N between 575W and 800W, a 225 m-wide anomaly on Line 35N between 800W and 1025W, and a lesser 50m wide anomaly on Line 42N between 1200 and 1250W. Four RAB holes on Line 28N returned averages of 1.0 g/t Au or greater over a minimum 8 meters: hole 98-NDR-32 (800W) with 1.5 g/t Au over 8.0 m; hole 98-NDR-33 (750W) with 2.4 g/t Au over 8.5 m; hole 98-NDR-34 (700W) with 1.0 g/t Au over 8.5 m; and hole 98-NDR-48 (575W) with 1.5 g/t Au over 10.0 m (Figure 4-12).

4.4.4 Agoudou - Manga Strategic Area

The Agoudou-Manga strategic area is located in the southwest corner of the Roandji permit (see Figure 4-3). At the time Asquith began field work on the permit in early 1996, the Agoudou-Manga area contained the only documented primary gold occurrence (the "Agoudou-Chantier gold occurrence"), a small quartz vein-hosted gold showing set in felsic intrusive, with a single reported grade of 50 g/t Au (Guillou et al., 1988). The Agoudou-Manga strategic area exploration program was carried out in the period September 1996 to December 1997. The exploration program comprised of a systematic overburden drilling and related geochemical sampling program, a localized overburden trenching and geochemical sampling program, a 181 km line cutting program and ground geophysical survey, a 1:2,500 scale survey of the surficial geology, and a follow-up (Level III) twelve-hole, 2443.6 m diamond drilling program.

The geology in the vicinity of the Agoudou-Chantier gold showing area was mapped by Asquith at a 1,2:500 scale (Buro, 1998). It includes a central NE-trending unit of oxide-facies banded iron formation (BIF); a tonalite intrusive adjacent to the southeast, a mafic metavolcanic unit to the north, and a sedimentary quartzite and quartz-mica schist unit to the southeast of the tonalite intrusive. All rocks in the area are cut by quartz-feldspar porphyry and silicified intermediate to mafic dikes generally trending 340° (Buro, 1998). The quartz-feldspar porphyry dikes are commonly foliated, and locally sheared, giving a schist-like appearance to the rock. The Agoudou-Chantier primary gold occurrence is hosted in a 340°-trending and NW-plunging, 20-60 cm wide quartz vein.

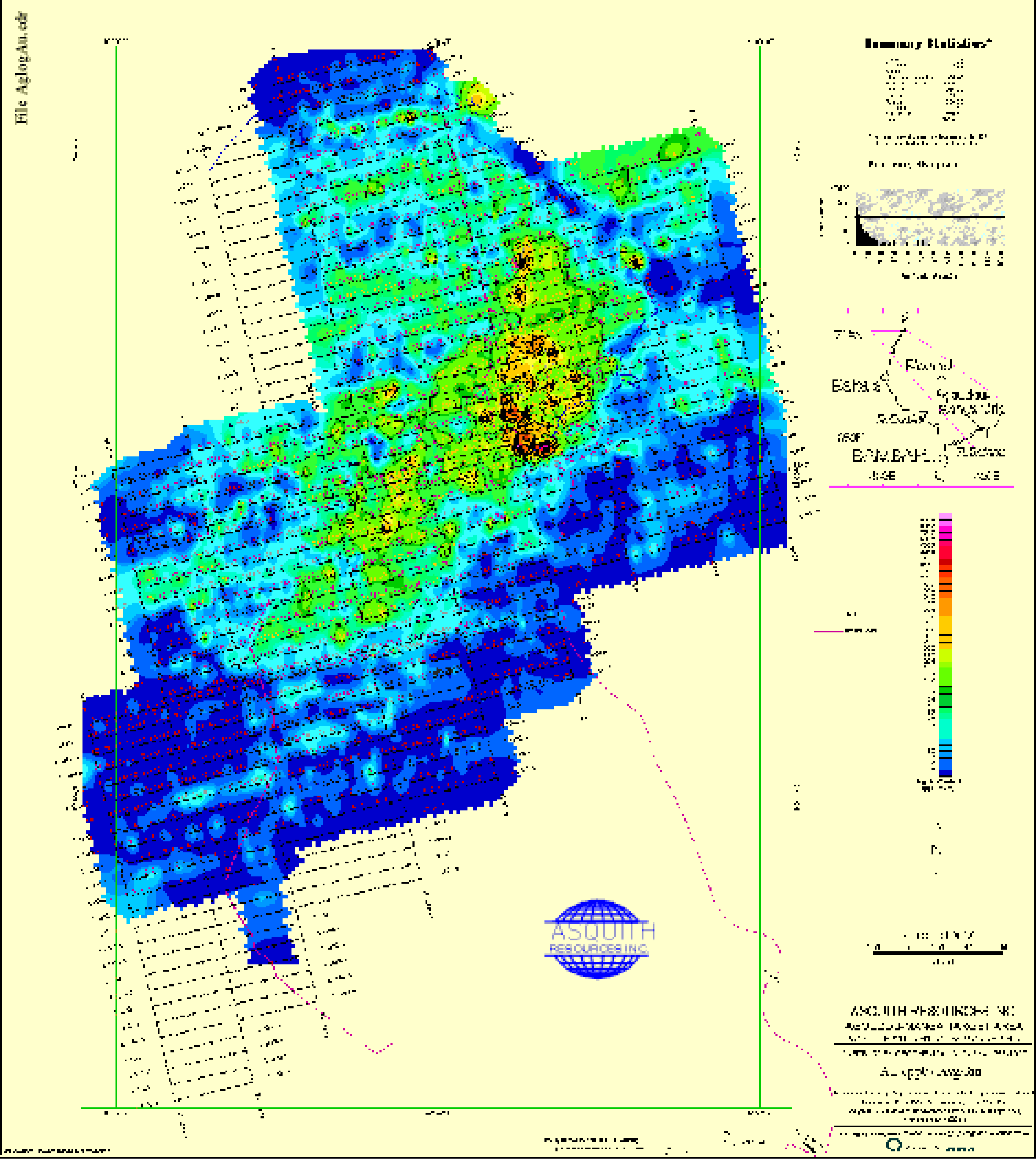
4.4.4.1 Overburden Drilling Program

From November 1997 to November 1998 a shallow overburden geochemical survey of the Agoudou-Manga area was undertaken, through the systematic percussion drilling and sampling of 4,725 overburden sites within the survey area. A total of 4,006 holes were drilled using two portable gas-operated Pionjar percussion drills equipped with specially designed l m-length split-spoon samplers. The Pionjar drilling was performed systematically at 25 m and 50 m spacing on 100 and 200 m spaced grid lines, to a maximum depth of 3 m. The individual 1m-length core sections were logged and then sampled for both geochemical analysis (500 ml sample) and for gold particle abundance determinations (1-1.5 litre sample). An additional 719 rotary air blast (RAB) percussion drill holes were performed using a Smith-Capital Micro-HR pneumatic percussion drill mounted alongside a Caterpillar compressor on the back of an articulated 5 tonne Timberjack skidder. Based on averaged Au assays over 3 m (Figure 4-13) a N-trending 1.4 km long, 100-250 ppb range Au anomaly associated with the Agoudou-Chantier primary gold showing was identified. The geochemical anomaly has a week gold particle signature (5-20 particles per litre). The northern 700m strike length section of the gold anomaly is underlain by BIF units, while the lowermost 500 m section overlies the tonalite intrusive.

4.4.4.2 Trenching and Pitting Program

A total of 12 trenches (Trenches A to L) totalling 382 m and 2 pits were dug manually with lengths varying from 15-35 m, and widths of 1-2.5 m. The depth of the trenches varied from 1 to 3 m. Systematic channel sampling on the trench floors at 1 m intervals was undertaken. Where quartz veins/layers were encountered, separate samples were collected. Two types of samples were collected, a 4 litre bulk sample for gold particle abundance determinations, and a 750 ml sample for Au analysis.

Of the 12 trenches completed on the Agoudou-Manga grid, Trench A (L0+02N/002E) was the only trench to expose the Agoudou - Manga quartz vein and country rock. Trench L averaged 1.62 g/t Au over a horizontal distance of 38.2 m. A rock sample (brecciated dark smoky quartz – magnetite BIF) from Trench D (L2+10N/020E) returned a grade of 4.85 g/t Au.



Courtesy of Asquith Resources Inc.

A.C.A. Howe International Limited

Figure 4-13. Color-contoured Geosoft plot of log-normally distributed Au (ppb) in overburden (averaged over 3 m) Agoudou-Manga strategic area overburden drilling program, Roandji property

4.4.4.3 Diamond Drill Program

A twelve hole, 2,443.6 m diamond drilling program was conducted by Asquith between February and April 1997, in order to test the original visible gold occurrence, including the lower 700 m section of the 1.4 km long Au anomaly identified by the systematic shallow overburden geochemical survey. The results from the diamond drilling have shown that the surficial geochemical gold anomaly is closely associated with a north-trending shear structure that transects a felsic intrusive body and a sequence of interbedded oxide-facies iron formation and mafic to intermediate metavolcanics (Figure 4-14). This shear structure has been intruded by numerous quartz veins and dikes of mafic or felsic composition. Gold occurs throughout the shear structure, principally hosted in two small (20-30 cm) quartz vein systems, generally located 10 to 20 m apart, and comprised of one or several quartz veins. The quartz veins are encased in a silicified host rock, and have minor associated sulphide mineralization.

Although the two main auriferous veins have been traced throughout all the holes drilled between sections 0+50S to 6+00N, the distribution of the gold is erratic and the grade at best sub-economic. Diamond drill hole AG-04 yielded the best grades with 22.10 g/t Au over 0.40 m (86.40-86.80 m interval) and 24.10 g/t Au over 1 m (103.10-104.10 m interval) in the upper and lower veins, respectively.

4.5 EXPLORATION BY ASQUITH / AXMIN JOINT VENTURE (2000)

The 1999-2000 exploration work program carried-out by the Asquith/AXMIN Joint Venture and managed by AXMIN was conducted in the following order:

a) Establishment of a new grid and detailed geological mapping of the Main Zone and French Camp termitaria anomalies followed by a two phase reverse circulation and rotary air blast drilling programs on the Passendro Main Zone and French Camp Target Areas and;

b) Reconnaissance and detailed soil sampling and geological mapping covering 200km^2 of the Bambari Permit within 5 target areas of alluvial gold mining.

Details of both programs are described in the following sections for each target area.

4.5.1 Passendro - Main Zone and French Camp Target Areas

In 2000, AXMIN personnel established a new grid over the Passendro Main Zone and French Camp Target Areas (see Figures 4-15 and 4-27). AXMIN's new baseline is oriented at 306° and was cut in order to overlay the known 50 ppb Au soil anomaly obtained by Asquith in 1998. Cross lines were cut at 036° - 216° at 180 meter intervals.

Geomorphological and surface geological mapping along AXMIN's new grid lines were carried out over the Passendro Main Zone and French Camp Target Areas (refer to Section 4.6 for Mineralisation and Exploration Targets).

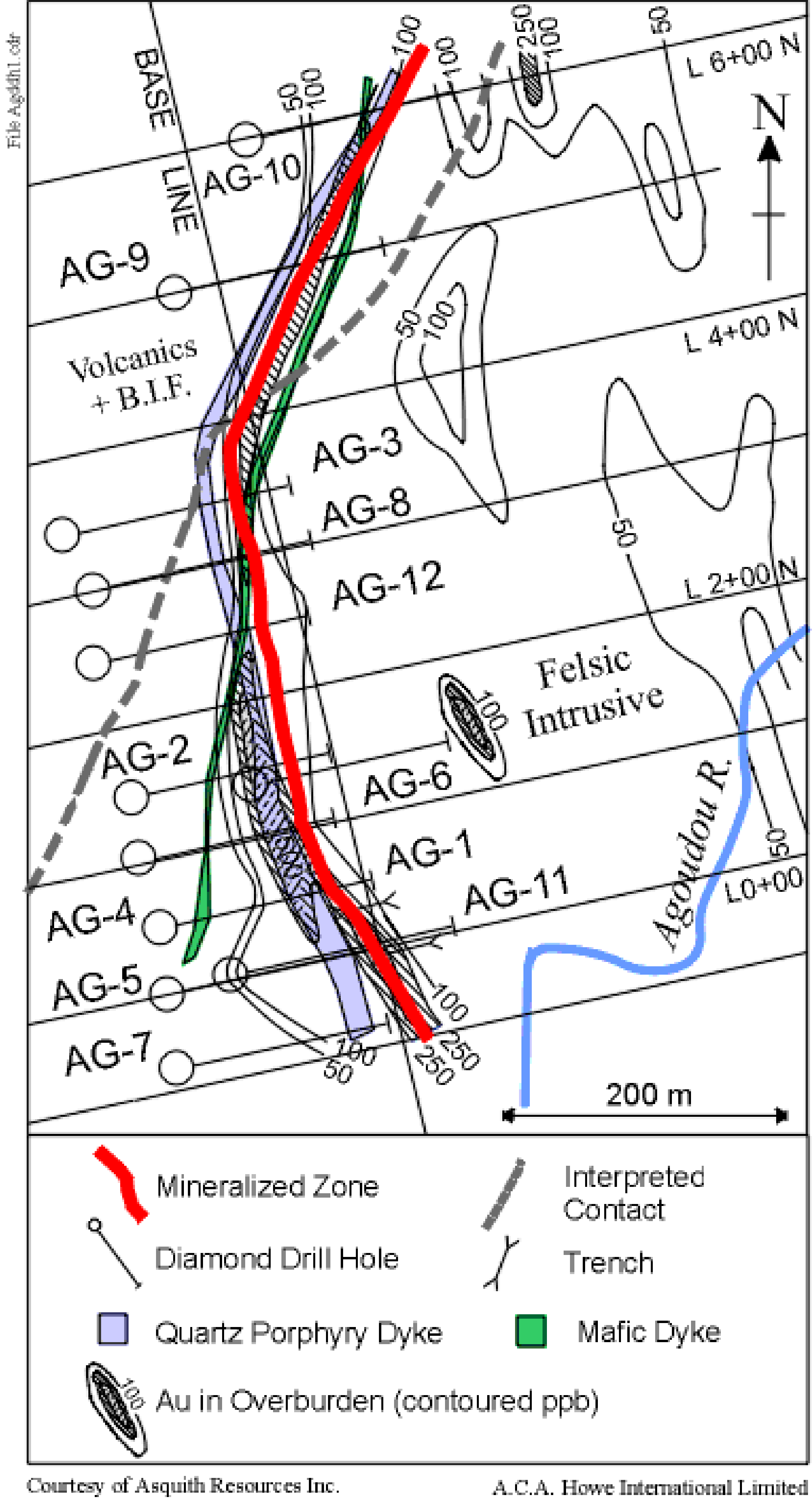
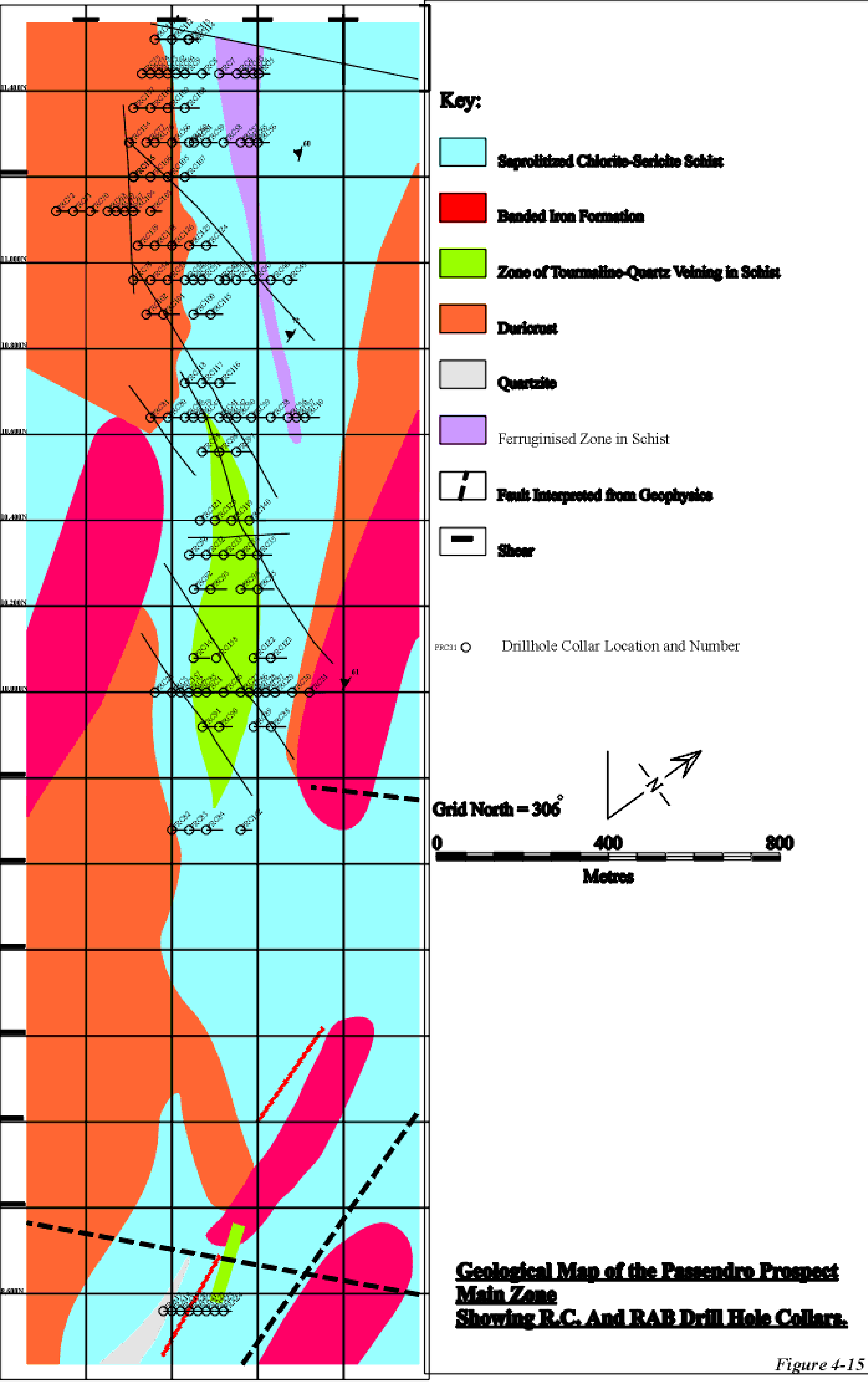


Figure 4-14. Plan map of the Agoudou-Chantier gold zone, 1996-98 Agoudou-Manga strategic area exploration program, Roandji property



Geological Map of the Passendro Prospect Main Zone Showing R.C. And RAB Drill Hole Collars.

Figure 4-15

Courtesy of AXMIN Limited

4.5.1.1 Reverse Circulation and Rotary Air Blast Drilling Programs

From October to December 1999 and from February to March 2000, a total of 144 reverse circulation holes ("RC") and 14 rotary air blast holes ("RAB") totalling 7,462 m were completed on the Passendro Main Zone and French Camp targets by AXMIN.

The Phase I RC drill program was designed to test the depth potential of gold mineralization below the Main Zone anomaly between AXMIN's lines 9680N and 11440N (Figure 4-15). Fence spacing was at 320 m and drill hole collars were spaced at 40 m intervals. All RC and RAB holes drilled along the fences at the Passendro Main Zone were oriented at an azimuth 036° and at an inclination of –50° from the horizontal. All RC and RAB holes completed at the French Camp target area were drilled at an azimuth of 057°(Asquith grid orientation). Phase II drill hole program was designed to test the continuity, shape, thickness and dip of gold mineralization encountered in the Phase I program. Infill RC drill hole fences were set out at 80 m centres on either side of the Phase I drill fences.

Table 4-5 is a summary of the drill metreage for the Passendro Main Zone and French Camp target areas from Phases I and II.

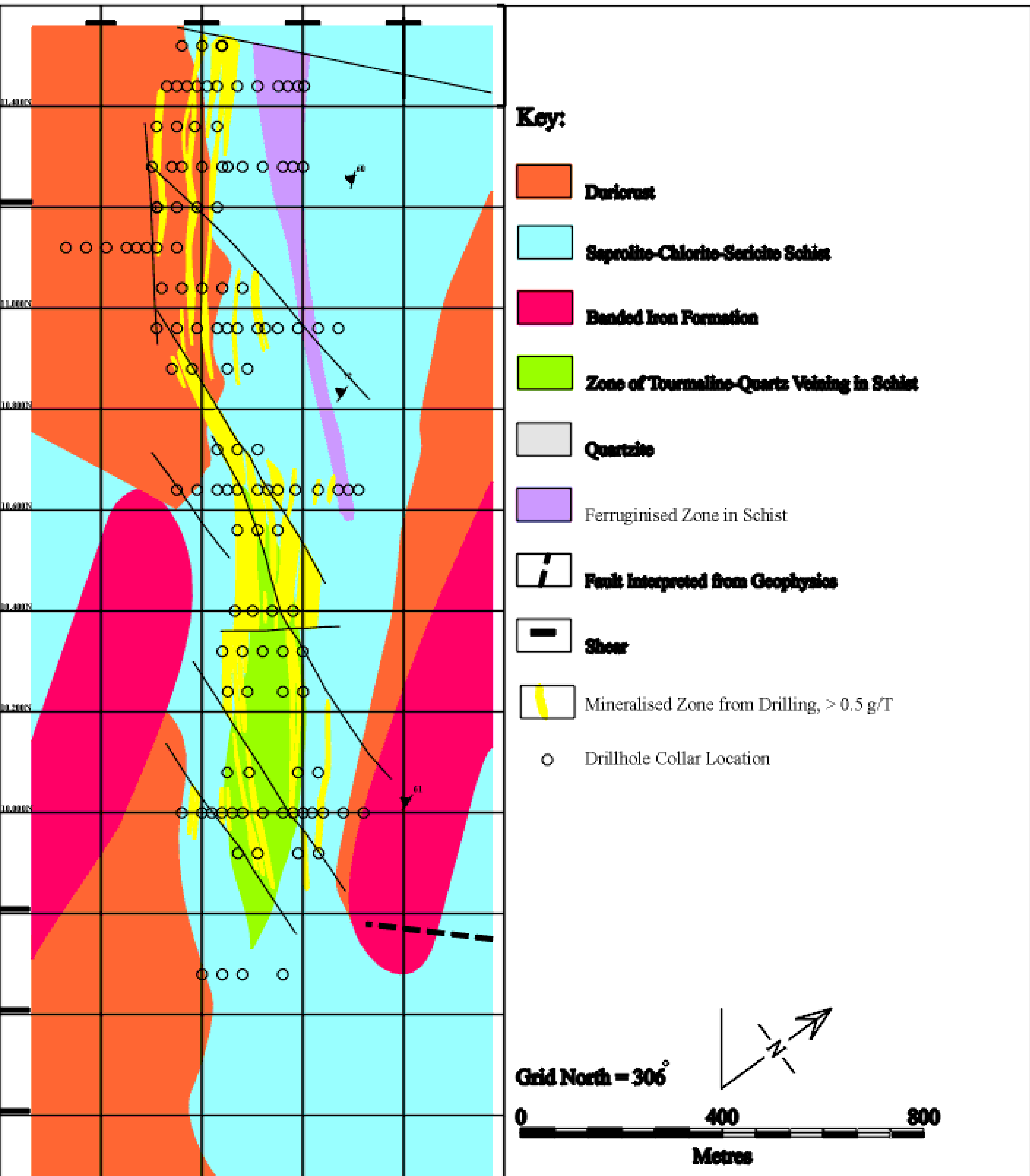
Table 4-5 Summary of Drilling Statistics

Target Area	No. of RC Drill Holes	No. of RAB Drill Holes	Metres Drilled
Main Zone	131	8	6,462.5
French Camp	13	6	999.5
TOTAL	**144**	**14**	**7,462.0**

All RC and RAB drill holes were sampled at 1.0 m intervals whereby each sample was collected in a large plastic sample bag that was held below the cyclone spigot by a drill helper. In order to screen out mineralized RC and RAB drill hole sections, AXMIN carried out a 5 metre composite sampling program for both the Phase 1 and 2 drill programs. Where a significant Au assay (>1.0 g/t Au) would be encountered from the 5 m composite, AXMIN would then send all relevant 1.0 m RC samples within the composite interval for assay, receive the assay results and record them accordingly. Details on AXMIN's sample preparation, splitting and analysis of RAB and RC samples are further described in Section 4.7.

AXMIN has noted that during the Phase 1 and 2 RC drill programs, the drilling contractor, AMCO Drilling Limited of U.K. ("AMCO"), experienced numerous drilling difficulties. Some difficulties of note are:

1) Holes drilled on duricrust during the wet season allowed water perched on the surface to run into several of the drill holes. This caused swelling of clay minerals in the saprolite which in turn caused the drill tools to get jammed in the hole (or lost) and;



Geological Map of the Passandro Prospect Main Zone Showing Drill Hole Collars and Interpreted Mineralised Zones.

Figure 4-16.

2) Mechanical and equipment problems as well as difficult drilling conditions prevented AXMIN's drilling contractor from drilling deeper holes.

4.5.1.2 Reverse Circulation and RAB Drill Results from the Passendro – Main Zone and French Camp Target Areas

Main Zone Target Area

One hundred and thirty-one (131) RC and eight (8) RAB drill holes were drilled along 22 cross-section fences in order to test the Main Zone 50 ppb Au termitaria soil anomaly previously defined by Asquith in 1999. The majority of the RC and RAB holes encountered gold bearing quartz tourmaline veins / veinlets hosted in a saprolitised chlorite-sericite schist unit bounded by NW trending BIF formations (see Figures 4-15 and 4-16).

Table 4-6 is a summary of gold anomalous RC and RAB drill hole intersections > 1.0 g/t Au:

Table 4-6 Summary of Anomalous Gold Intersections

Fence Number	Drill Hole Number	From (m)	To (m)	Intersection (m)	Arithmetic Average Grade (ppm Au)	Notes
8560	PRA022	5	10	5	4.80	5 m composite
	PRA024	0	10	10	1.20	5 m composite
9920	PRC088	12	14	2	1.30	
	PRC089	10	11	1	1.20	
		12	16	4	1.90	
	PRC090	5	15	10	1.2	5 m composite
		16	17	1	2.30	
		19	20	1	3.70	
	PRC091	31	34	3	1.20	
		38	39	1	1.30	
		40	42	2	1.1	
		45	49	4	2.60	
		52	52.5	0.5	1.00	
	PRC092	5	10	5	1.3	5 m composite
10000	PRC01	10	35	25	2.46	Two 5 m composite
	PRC02	18	20	2	1.04	
		50	57	7	6.29	
	Includes	*51*	*52*	*1*	*41.00*	
	PRC025	45	46	1	5.21	
	PRC026	47	48	1	1.34	

	PRC027	22	28	6	1.81	
	PRC028	25	30	5	1.7	5 m composite
	PRC029	5	15	10	3.30	5 m composites
	PRC085	35	36	1	1.91	
		43	44	1	2.91	
	PRC086	42	53	11	1.08	
	Includes:	*42*	*43*	*1*	*1.40*	
		44	*46*	*2*	*2.15*	
		47	*48*	*1*	*1.50*	
		49	*51*	*2*	*1.00*	
		52	*53*	*1*	*2.20*	
	PRC087	12	27	15	3.68	
	PRC157	20	25	5	6.26	
		73	74	1	2.90	
		81	83	2	1.10	
		86	89	3	6.05	
10080	PRC122	0	10	10	1.10	5 m composite
	PRC123	18	25	7	2.70	5 m composite
	PRC141	25	30	5	2.6	
	PRC158	23	30	7	4.90	
		41	42	1	3.20	
10240	PRC094	17	18	1	8.70	
		20	24	4	2.60	
		30	35	5	2.30	5 m composite
	PRC095	3	12	9	5.30	
10320	PRC034	20	30	10	1.30	5 m composites
	PRC035	10	20	10	1.70	5 m composites
	PRC096	5	18	13	2.52	5 m composites
10400	PRC119	25	28	3	1.38	
	PRC120	26	30	4	1.54	
	PRC140	20	40	20	15.97	Includes two 5 m composite
10560	PRC097	15	20	5	1.80	5 m composite
	PRC098	0	20	20	4.19	Includes two 5 m composites
10640	PRC038	25	35	10	2.0	5 m composites
	PRC039	50	55	5	2.70	5 m composite
	PRC040	0	5	5	1.70	5 m composite
		10	15	5	1.20	5 m composite

	PRC041	40	42.8	2.80	1.20	
	PRC042	15	30	15	4.30	three 5 m composites
	PRC043	20	25	5	1.60	5 m composite
		30	35	5	1.20	5 m composite
	PRC079	20	25	5	1.20	5 m composite
10720	PRC116	10	11	1	1.00	
		13	14	1	1.40	
	PRC117	1	3	2	4.15	
	PRC118	38	39	1	1.10	
		42	43	1	1.50	
10880	PRC101	19	20	1	1.70	
		53	54	1	6.10	
		55	56	1	2.00	
	PRC102	34	51	18	1.00	Includes two 5 m composites
10960	PRC049	5	10	5	1.20	5 m composite
		20	23	3	6.80	
	PRC053	20	30	10	1.00	two 5 m composites
	PRC054	16	21	5	1.30	5 m composite
		36	41	5	1.0	5 m composite
	PRC055	10	15	5	2.20	5 m composite
11040	PRC124	30	40	10	1.00	two 5 m composites
	PRC126	0	5	5	15.80	5 m composite
		18	15	5	1.98	
	PRC138	2	3	1	3.30	
		17	18	1	1.50	
		34	35	1	1.70	
		50	51	1	1.00	
		56	57	1	3.20	
11120	PRC067	5	10	5	10.10	5 m composite
	PRC103	32	40	8	2.68	Includes one 5 m composite
	PRC104	7	9	2	3.40	
		13	14	1	1.20	
11200	PRC105	28	30	2	1.00	
		35	40	5	1.30	5 m composite
	PRC106	35	40	5	8.20	
		41	42	1	2.10	
		44	45	1	3.00	

	PRC136	15	17	2	1.00	
11280	PRC057	10	15	5	2.10	5 m composite
	PRC076	10	25	15	2.38	
11360	PRC 108	5	10	5	2.49	
		22	30	8	1.30	Includes one 4 m composite
	PRC109	30	32	2	4.12	
		56	57	1	33.35	Sulphides (pyrite)
	PRC110	23	24	1	46.62	
		32	33	1	1.70	
		35	36	1	2.31	
		39	40	1	1.43	
11440	PRC04	10	12	2	6.26	
		15	16	1	1.83	
	PRC07	42	45	3	1.90	
	PRC09	8	10	2	1.92	
		14	25	9	1.32	
	PRC062	25	28	3	1.25	
	PRC064	9	18	9	1.38	
		23	27	4	1.02	
		29	33	4	1.50	
	PRC073	6	13	7	3.94	
11520	PRC111	48	49	1	2.62	
	PRC112	15	24	9	1.62	Includes one 5 m composite
12240	PRC127	0	5	5	1.40	5 m composite
	PRC130	38	42	4	1.90	
	PRC132	10	15	5	1.90	5 m composite
	PRC133	12	14	2	1.95	
		16	17	1	1.60	

(Notes: intervals are arithmetically averaged (not weighted) whether the sample intervals are 1.0 m or 5.0m and assay intervals were not constrained by changes in lithology)

The following is a brief description of the geology and mineralization of three RC drill holes completed on the Passendro Main Zone grid area:

Hole PRC-87

Hole PRC-87 was drilled from L10000N / 10220E at an azimuth of 036° and an inclination of -50° (see Figure 4-17). PRC-87 was drilled to test the down-dip extension and width potential of the auriferous intersection obtained in Hole PRC-29 (3.30 g/t Au over 15.0m) obtained from a saprolitised ferruginous chlorite schist unit with tourmaline and minor quartz veining. PRC-87 intersected the following units: BIF fragments to 6.0m, reddish ferruginised schist and a sequence of ferruginised schist and a brown-buff saprolitic material (parent rock unknown) with minor quartz veinlets. The gold mineralized interval occurs from 12.0m to 19.0m (down hole depth) with an arithmetic average grade of 3.68 g/t Au over 5.0 m. The RC hole was not drilled to fresh bedrock.

Hole PRC-140

Hole PRC-140 was drilled from L 10400N / 10180E at an azimuth of 036° and an inclination of -50° (see Figure 4-18). PRC-140 was drilled to test the strike extension and width of the auriferous intersections obtained in Holes PRC-34 and PRC-35 located along drill fence 10240N. Hole PRC-140 intersected the following units: BIF and schist fragments (0-7m), brown to buff

Figure 4-17 Line 10,000N Profile (Main Zone)

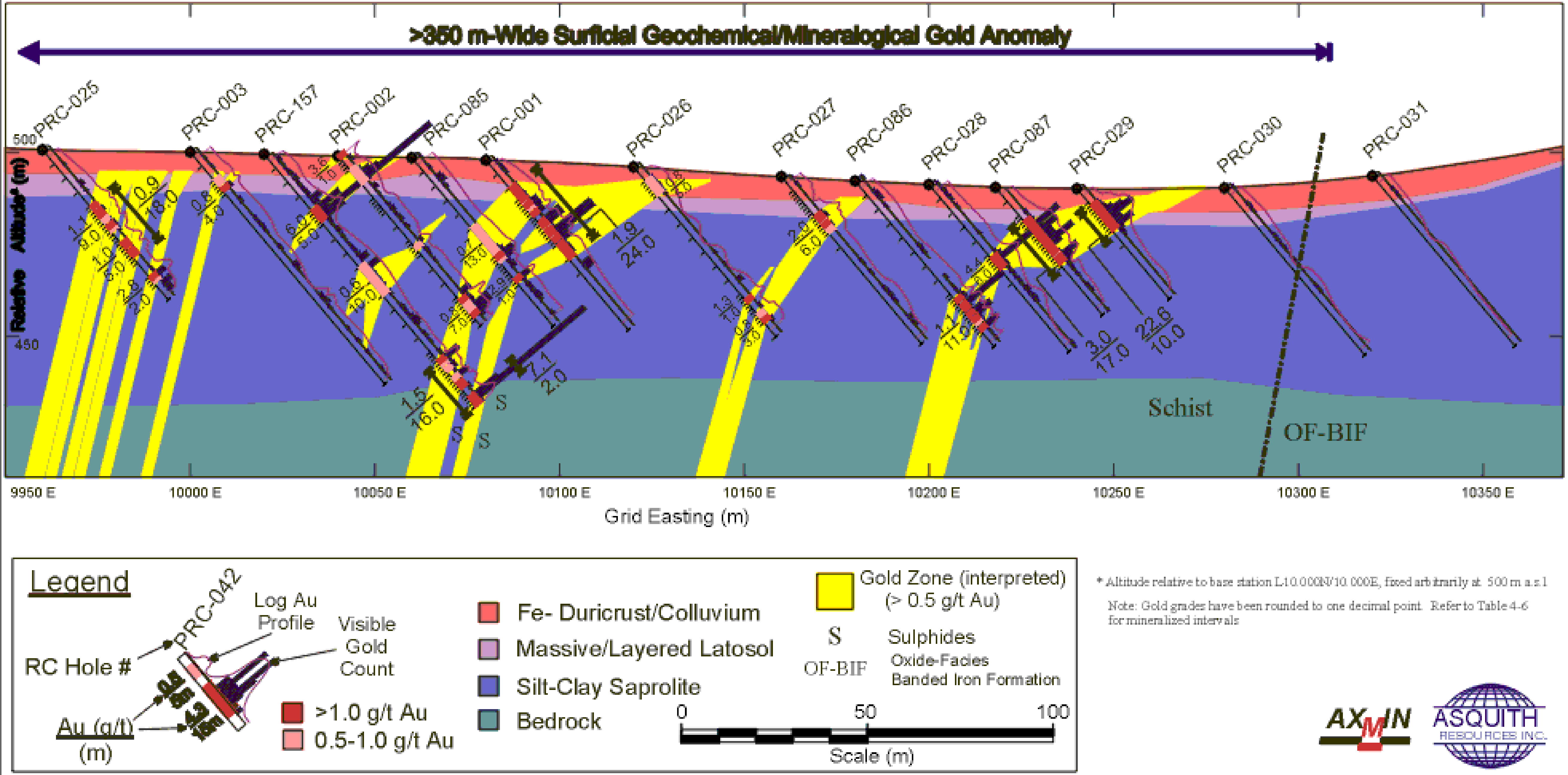
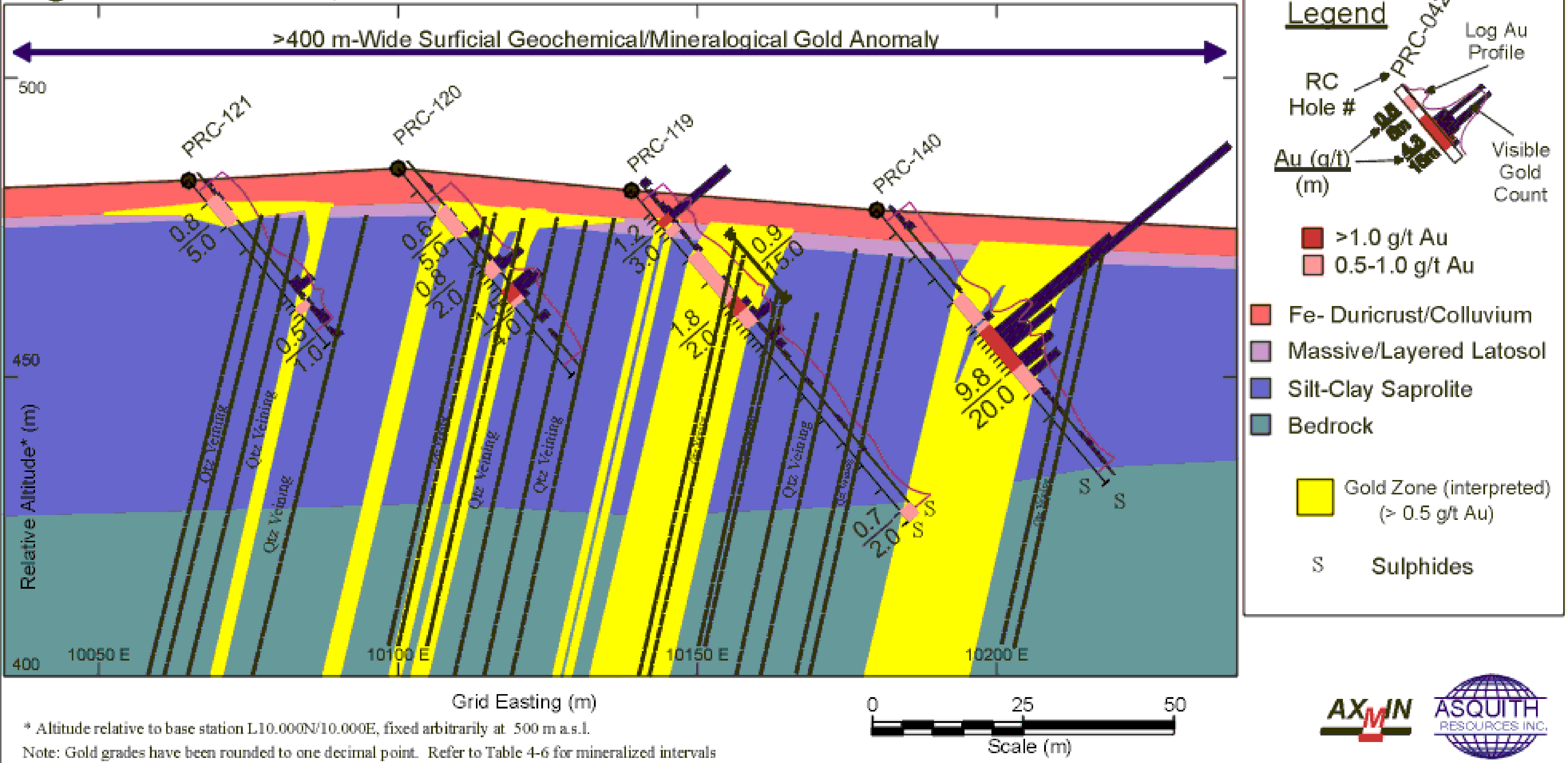


Figure 4-18 Line 10,400N Profile (Main Zone)



* Altitude relative to base station L10.000N/10.000E, fixed arbitrarily at 500 m a.s.l.

Note: Gold grades have been rounded to one decimal point. Refer to Table 4-6 for mineralized intervals saprolite (7-54m) with ferruginous schist and quartz–tourmaline veins, and sulphide zone (pyrite) in a chlorite-biotite-sericite schist unit. The gold mineralized interval occurs from 26-40m (down hole depth) in a reddish brown chlorite schist unit with minor quartz vein (± tourmaline) material with an arithmetic average grade of 27.10 g/t Au over 14.0m.

Hole PRC-109

Hole PRC-109 was drilled from L 11360N / 9990E at an azimuth of 036° and an inclination of -50°. PRC-109 was drilled to test the down-dip extension and width potential of the auriferous intersections obtained in Hole PRC-108 (2.50 g/t Au over 2.50m and 1.30 g/t Au over 8.0m). Hole PRC-109 intersected the following units: schist fragments in laterite, and brown-buff saprolite with minor quartz veinlets. Fresh sulphides (pyrite) were encountered at the end of hole in greenish silicified chlorite schist with amphibole remnants. Two gold mineralized intervals were intersected: from 30 to 32.0m (2.30 g/t Au over 2.0m) and from 56 .0 57.0m (29.40 g/t Au over 1.0m).

French Camp Target Area

Thirteen (13) RC and six (6) RAB holes were drilled along four (4) cross-section fences in order to test the 800 m long by 500m wide 50 ppb Au termitaria soil anomaly previously defined by Asquith in 1999. The majority of the drill holes intersected a series of ferruginised schist and chlorite-sericite schist units (± quartz veins and tourmaline) bounded by N-S trending BIF units.

Table 4-7 summary of gold anomalous RC and RAB drill hole intersections > 1.0 g/t Au:

Fence Number	Drill Hole Number	From (m)	To (m)	Intersection (m)	Arithmetic Average Grade (ppm Au)	Notes
140N	PRC-146	52.0	60.5	8.5	3.47	
	PRC-153	12	20	8	1.41	
	includes:	12	14	2	2.93	
		18	19	1	2.12	
300N	PRC-143	15	31	16	4.99	
	PRC-144	16	18	2	3.98	
	PRC-152	22	25	3	1.07	One 3m composite
	PRC-145	47	52	5	2.40	
		60	62	2	2.15	
	PRA-11	25	29	4	6.57	
	PRA-12	0	2	2	1.85	
		5	13	8	3.82	
		18	25	7	2.50	
460N	PRC-147	25	30	5	1.67	One 5m composite

(Notes: intervals are arithmetically averaged (not weighted) whether the sample intervals are 1.0 m or 5.0m. The calculated arithmetic average gold grade of several RAB and RC holes are based on the computation of two or more check assays per sample interval.)

The following is a brief description of the geology and mineralization of one RC drill hole completed on the Passendro French Camp grid area:

Hole PRC 143

Hole PRC-143 was drilled from L 300N / 1580W at an azimuth of 057° and an inclination of -50°. PRC-143 was drilled to test the down-dip extension and width potential of the auriferous intersections obtained in Hole PRA-12 (3.82 g/t Au over 8.0m and 2.50 g/t Au over 7.0m). Hole PRC-143 intersected the following units: saprolitic BIF with few schist fragments, and ferruginised schist from 22m-37m and 44 to the end of the hole. Fresh sulphides and quartz veinlets were encountered from 38m-45m. One gold mineralized interval was intersected from 15.0 to 31.0m (4.99 g/t Au over 16.0m) (Figure 4-19).

4.5.2 AXMIN Regional Exploration Program (1999-2000)

4.5.2.1 Reconnaissance Soil Sampling and Geological Mapping Programs

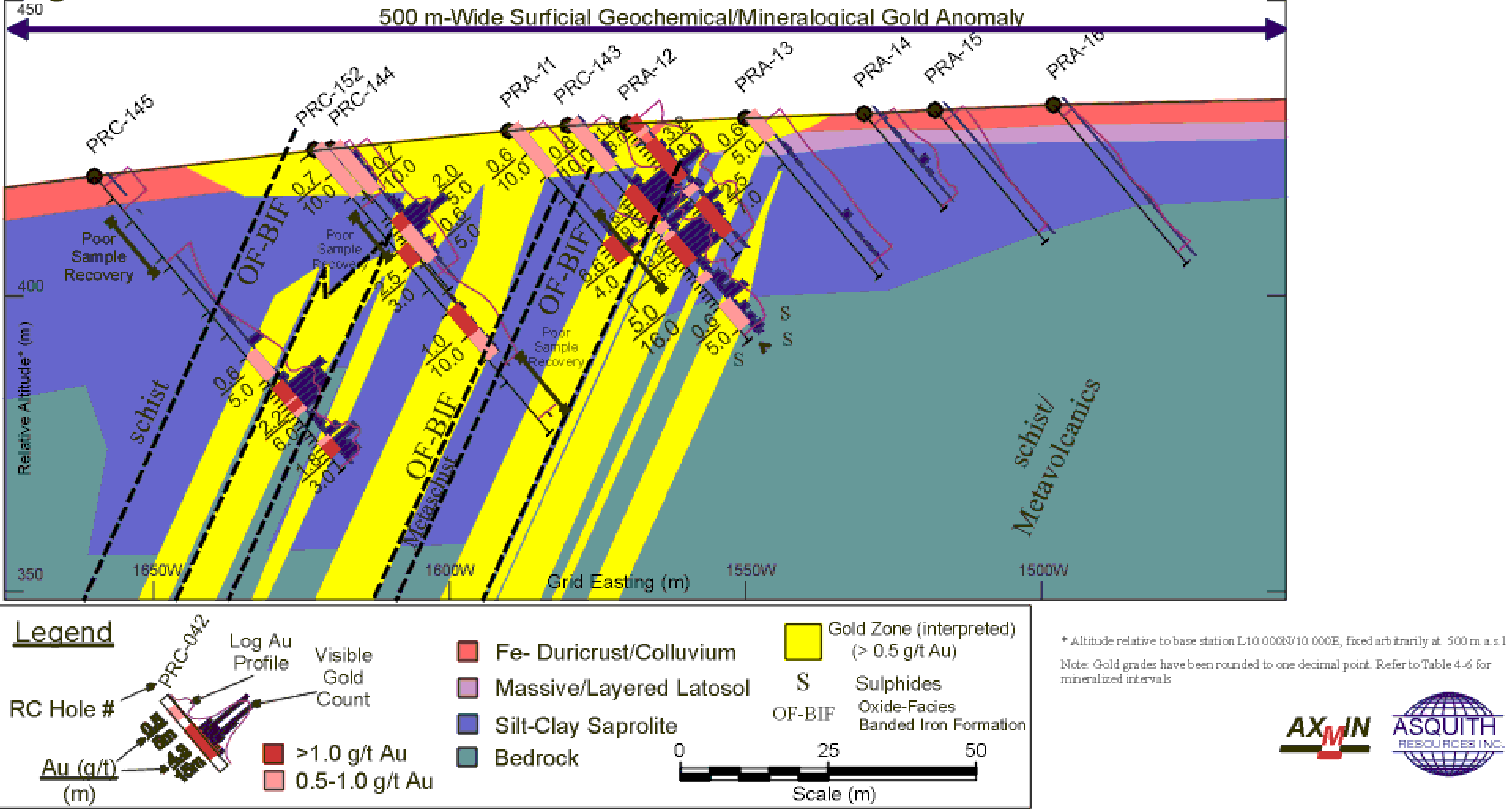
From late February to early June 2000, AXMIN carried out a reconnaissance field work program over 200 km^2 of the Roandji Project area as part of AXMIN's 51% earn-in to the project (Figure 4-20). The objective of the AXMIN reconnaissance exploration work was to identify additional exploration targets for follow-up work. A review and re-interpretation of Landsat TM7 data, Asquith's airborne geophysical data and historical gold mining activity was undertaken. This work led AXMIN to select areas for reconnaissance scale conventional soil sampling and mapping.

Four target areas were selected by AXMIN for follow-up reconnaissance work: Ndassima Grid, Louba Grid, North 1 and North 2 Grids and the Ao Grid (see Figure 4-21).

Table 4-8 summary of the regional program statistics:

Grid Name	Baseline length (km)	Line length/number of lines	Total line (km)	Area covered (km^2)	Total number of soil samples taken
Ndassima	10.70	5000 / 26	140.70	52.0	1,326
Extension (French Camp)	6.40	2000 / 9	24.40	12.80	180
North 1	None	4000 / 14	56.0	41.60	574
North 2	23.20	4000 / 7	28.0	22.40	287
Louba	None	6000 / 9	77.20	43.20	549
Ao	10.80	3000 / 14	52.8	28.80	434
TOTAL	**51.10**		**379.10**	**200.80**	**3,350**

Figure 4-19 Line 300 N Profile (French Camp)



Courtesy of AXMIN Limited

Roandji Permit Showing the Regional Soil Sampling Grids

Figure 4-20

Courtesy of AXMIN Limited

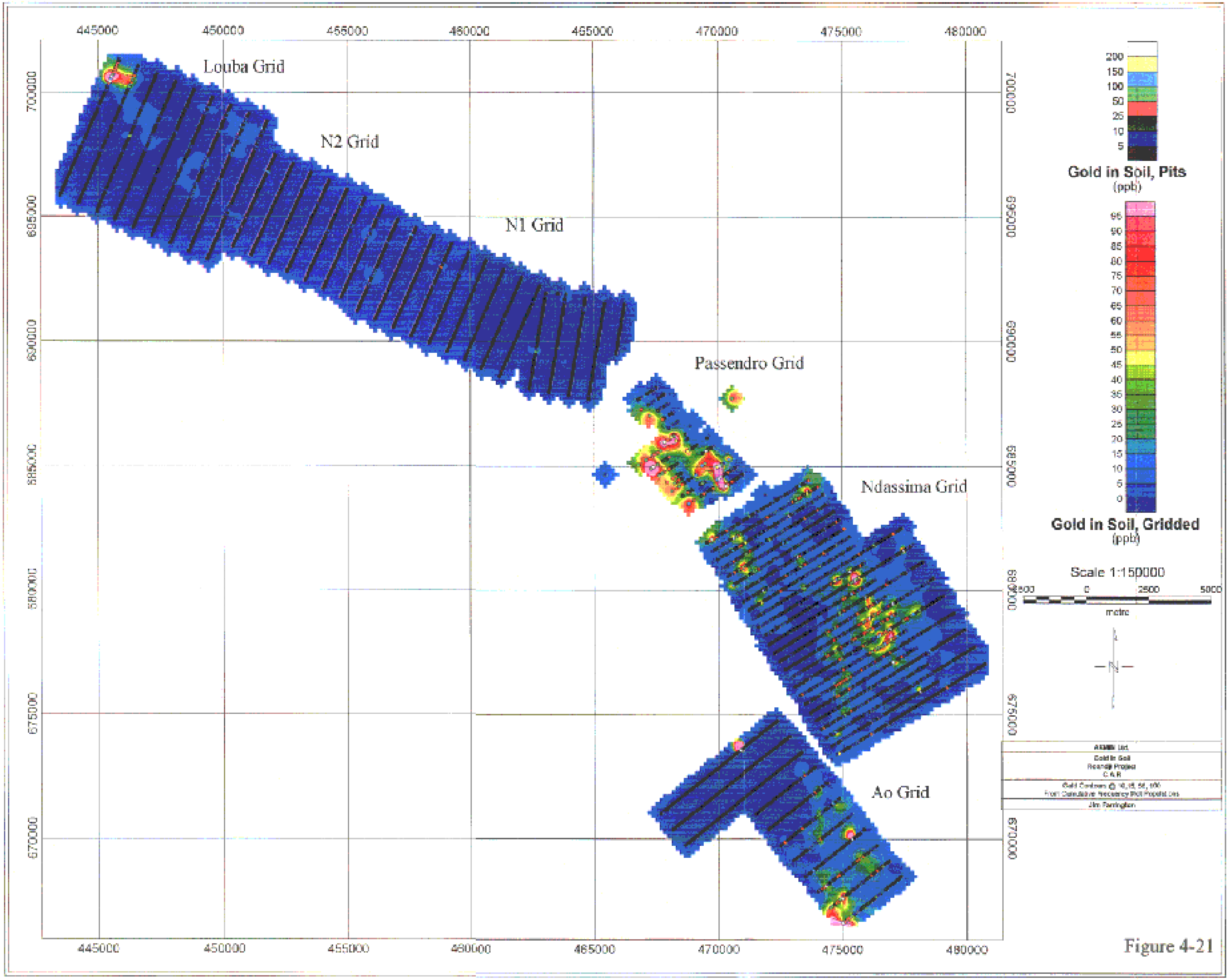


Figure 4-21

Courtesy of AXMIN Limited

All of the grid areas were sampled on 800 m by 100 m whereas the Ndassima grid was sampled on a 400 m by 100 m grid.

During the first pass recce program all soil sample media (soil or lag) were collected at 100 m intervals along cross-sectional lines at the B/C soil horizon boundary, which varies in depth from 0.10 to 0.40m. During the dry season, soil samples were collected and dry sieved in the field using a 1mm sieve. Samples were sieved, and approximately 500 to 800g of the –1mm material was then bagged in a pre-numbered Kraft packet with a sample number ticket inside (Bills 2000). Information such as the depth of sample, soil colour and position of the sample with respect to the local topography was noted by the soil sampler. During the wet season, soil samples collected from the Louba, Ao and Ndassima Extension grids were not sieved in the field but collected and bagged immediately due to moisture content. In areas covered with duricrust (cuirasse), lag samples were collected from a 1-2 m^2 area consisting of 500-800g of coarse, loose, unsieved material with laterite pisoliths or irregular nodules scraped from the top few millimetres of material lying on the duricrust surface. Lag samples were collected from the Louba, Ao and Ndassima Extension grids only.

Soil Sample Preparation and Analysis

The following is a description of AXMIN's soil sample collection and preparation methodology taken from Bills (2000).

"Sample preparation was carried out at Ndassima camp in one of the 20 foot containers. The floor of the container was cemented and established as the dedicated soil sample preparation laboratory. The container is some 100 metres from the sample prep area that was used for RC samples and there is no sharing of equipment or materials and thus no cross contamination is likely to have taken place.

"The soil samples were sun-dried, sieved using 80# screen cloth to produce 100g of 80# material and placed, together with a sample number ticket, in a clean pre-numbered Kraft packet. The remainder of the sample was re-bagged in the original packet and archived.

"The treatment of the lag samples from the Ndassima, N1 and N2 grids was carried out as follows: sun dry the sample and sieve using a 80# sieve to produce a 100g sample of –80# material. In cases where there was insufficient –80# material, the remaining –1mm + 80# fraction was crushed in a pestle and mortar (dolly pot) and resieved at 80# to make up the 100g sample for analysis.

"This procedure was changed for the Louba and Ao grid lag samples as follows: each sample was sun-dried and then sieved at 10mm and 2mm. The entire resulting –10m +2mm fraction was placed in a clean Kraft packet along with a sample number (usually comprising 250-500g of material). The +10mm was discarded and the –2mm fraction was panned for VG (visible gold).

All soil samples were analysed for gold only using OMAC Laboratories P1 sample preparation and Au1 analysis (25g wet geochemical analysis with a >2 ppb Au detection limit). Of the 3,350 samples collected on the four soil grids, 48 samples returned analyses > 100 ppb Au. Figure 4-17 represents the 10 ppb Au, 15 ppb Au, 50 ppb Au and 100 ppb Au contoured soil anomalies obtained from all four grid areas.

4.5.2.2 Reconnaissance Soil Sample Results and Interpretations from the Ndassima, Ndassima (French Camp) Extension and Ao Grids

4.5.2.2.1 Ndassima, Ndassima (French Camp) Extension Grid Areas

Based on the soil sampling survey over the Ndassima and Ndassima (French Camp) Extension Grids, two Au soil anomalies stand out: 1) in the NW corner of the grid where the soil anomaly is the inferred extension of the French Camp soil anomaly and gold mineralisation and 2) the central portion of the grid area. The extension of the French Camp soil anomaly extends 400 m to the SE (Figure 4-17). The soil anomaly is off-set 500 m to the east (sinistrally) and continues for approximately 1,600 m to the SSE (see Figure 4-21). According to Bills (2000), “the shape of the anomaly suggests that part of the anomaly may be related to the upper reaches of the Nguetepe River (which parallels the anomaly) and there is evidence of old alluvial workings in the area (line 2000S)”.

The second soil anomaly is located in the central part of the grid and extends for at least 2,000 m (see Figure 4-21). Using a 15 ppb Au contour interval, the Au anomaly has a length of 4.4 km and has a maximum width of 2.5 km. According to Bills (2000), the soil anomaly overlies a thick sequence (5 km) of folded BIF-dominated greenstone whereby much of the underlying rock is chemically weathered into laterite.

Bills (2000) also indicated that two smaller Au anomalies were also identified during the reconnaissance soil sampling program: one Au anomaly located in the northern corner of the grid near the village of Djoubissi and the other, “an extensive narrow zone of elevated gold values, which trends due south from the centre of the Ndassima grid, for over 7 km in to the Ao grid (see Figure 4-21). This Au soil anomaly is coincident with the underlying BIF unit.

4.5.2.2.2 Ao Grid Area

Based on the reconnaissance soil sampling on the Ao grid, two significant soil anomalies were identified: one associated with a prominent 1.6 km long NW trending BIF ridge and the second, a stronger soil anomaly associated with the tourmalinised contact between BIF and a granitic intrusive (Figure 4-21).

4.5.2.2.3 N1, N2 and Louba Grids

Based on the results of the reconnaissance soil sampling survey carried out by AXMIN, only one significant Au soil anomaly was identified in the Louba Grid whereas several single sample anomalies (>100 ppb Au) were identified in all three grid areas. The Louba Grid soil anomaly is approximately 300m by 400m wide (see Figure 4-21). According to AXMIN, the soil anomaly appears to be associated with a BIF ridge located south of the Louba River. The Au soil anomaly remains open to the north.

4.5.2.3 Detailed and Archived Soil Sampling Surveys

4.5.2.3.1 Detailed Soil Sampling Surveys

Following the results obtained from the reconnaissance soil sampling survey, AXMIN carried out an in-fill soil sampling survey over the following target areas during the latter part of 2000:

- **French Camp Extension**: A 5.7km² block of ground covering the 10ppb Au contour line of the reconnaissance Au soil anomaly was chosen for the infill soil sampling and detailed mapping; a total of 512 soil samples were taken.

- **Central Ndassima**: A 17km² block covering two discrete soil anomalies at the 10ppb Au level was chosen for the infill soil sampling and detailed mapping; a total of 1332 soil samples were taken.

- **Ndassima Block 1**: A 4km² block covering the 10ppb Au contour line of the anomaly was selected and 346 soil samples were collected.

- **Ao**: An area of 16.3km² covering the 10ppb Au contour line of the anomaly was selected for infill soil sampling and detail mapping; a total of 1274 soil samples were collected.

- **North 1 Extension**: The North 1 Extension Grid was selected on the basis of an extensive linear K-high anomaly identified in the airborne radiometric data. A block of 16.2km² covering the potassium anomaly was gridded and sampled on a grid of 800*100 metre grid for 224 samples.

Infill geochemical sampling was carried out on 200m by 50m sampling grids except for the North 1 Extension (as noted above). As with the reconnaissance soil sampling program, the sampling methodology, sample preparation and analysis was carried out as described in Section 4.3.3.2.1.

Results

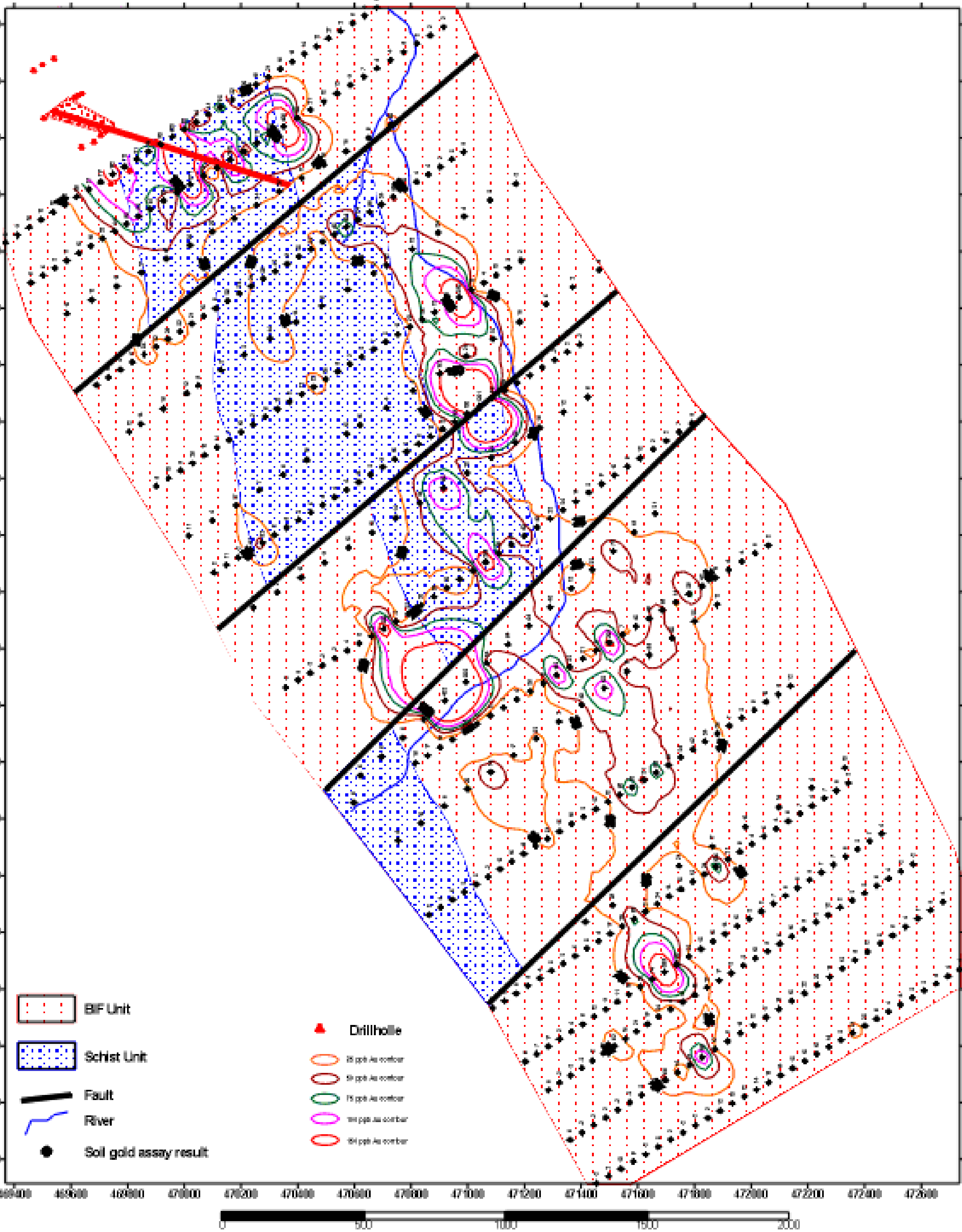
The following summarizes the results (obtained to date) of the detailed in-fill soil sampling carried out by AXMIN in 2000:

Ndassima Grid

Two distinct 50ppb Au soil anomalies are present (Figure 4-22):

1) The SE extension of the French Camp Target Area located at 682400N / 470000E and;

Figure 4-22. French Camp Extension In-Fill Soil Grid and Geology



Courtesy of AXMIN Limited **A.C.A. Howe International Limited**

2) A 3,500m by ~ 500m, NNW trending 50ppb Au soil anomaly which is associated with the inferred geological contact between a schist unit and BIF unit. Where inferred faults occur, the Au soil anomalies appear to be wider.

Ao Grid Area

Four distinct 50ppb Au soil anomalies (Figure 4-23) occur on the Ao grid. The Au soil anomalies have strike lengths of up to 1,000m and widths ranging from 200m to 500m. These soil anomalies are associated with:

- Geological contact between acid volcanics – volcaniclastic rocks and BIF units and

- Geological contact between acid volcanics – volcaniclastic rocks and a granitic intrusion with local quartz-tourmaline vein fragments.

AXMIN has noted that two of the above soil anomalies (1 and 3 on Figure 4-23) are possibly related to the source area from which alluvial gold mining took place in the 1930's.

4.5.2.3.2 Passendro Grid Archive Soil Sample Investigation

Due to gaps and the uneven nature / sampling distribution of the termitaria geochemical data set, AXMIN prepped and analysed a large part of Asquith's extensive and detailed (400m by 100m and 200m by 50m) soil and lag sample archive covering the entire Passendro Grid area. A total of 1,823 soil and lag samples were collected from Asquith's sample archive in Bangui where they were prepped and then shipped to OMAC Laboratories of Ireland for Au analysis.

The Passendro soil sample archive results, in combination with the existing termitaria geochemistry data set and its interpretation, integrated with the digital terrain model, surface geology and the ground magnetometer results have generated at least 7 new drill targets within and parallel to the Main Zone and French Camp trends. These targets are summarised as follows by AXMIN:

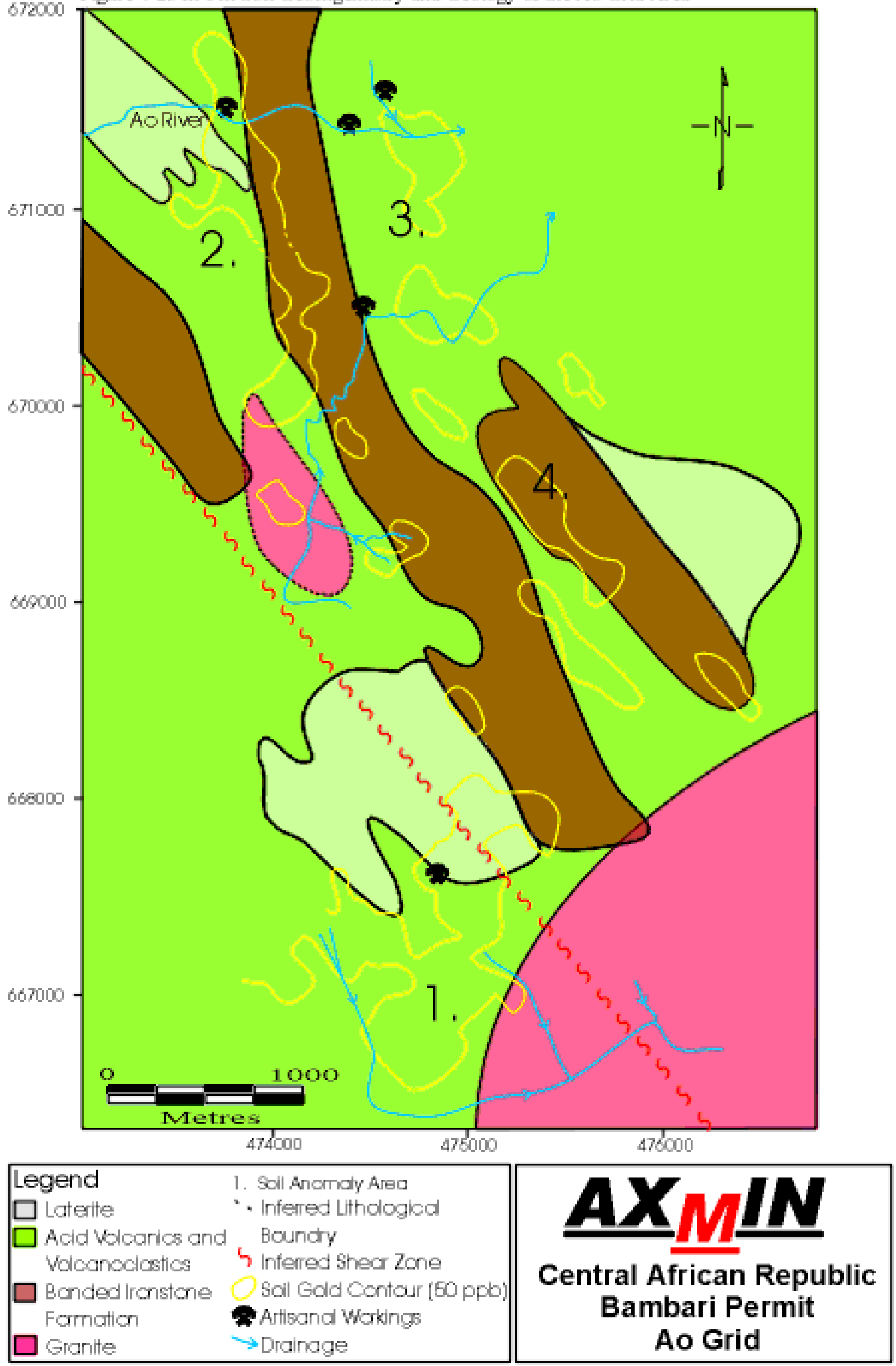
- The Main Zone soil anomaly, south of 9680N has emerged as a worthy drill target adding 400 metres to the potential strike length of the Main Zone. The anomaly has a +100ppb width of approximately 200m and a core of +250ppb Au in soils and termite mound samples of 150m.

- The apparently faulted south extension of the Main Zone (South) soil anomaly, between 9300N and 8300N, has been strengthened by the results of the archive soils. This anomaly has a strike length of some 1.2km and is located between two narrow BIF units in chlorite-quartz schist. The +50ppb halo is some 3-400m wide within which are several areas having values up to >500ppb. The anomaly is complex and may have been simplified in the present interpretation.

- The French Camp Trend now appears as a series of narrow high value zones within a >50ppb

Au halo some 4.5km long. These anomalies are associated with a series of discontinuous BIF

Figure 4-23 In-Fill Soil Geochgemistry and Geology of the Ao Grid Area



Courtesy of AXMIN Limited

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- ridges on high ground but they are weaker and narrower compared to the Main Zone anomaly, which overlies chlorite-quartz schists. It is likely that BIF hosted gold mineralisation produces relatively less intense soil anomaly signatures compared to gold mineralisation in schists. Northwest of the French Camp prospect there are three narrow, elongated zones having +250ppb Au in soils within the +50ppb halo.

- French Camp East is probably a separate parallel zone of gold in soil that has been delineated 150m east of the French Camp prospect. This anomaly is up to 1.5km long and is underlain by chlorite-quartz schist with minor BIF intercalations and abundant black tourmaline float, but is masked by an extensive ramp-like indurated laterite surface comprising in places two distinct duricrust types. The most intense part of the anomaly is some 500*200m in extent with gold in soil values +250ppb.

- Two parallel anomalies lie to the west of the Main Zone though they are probably unrelated. One is associated with BIF located west of the Yangubakoya ravine and consists of 4 small +250ppb areas within a +50ppb halo some 1.5km long. The geomorphology of the area suggests that it is a discrete anomaly and unconnected to the Main Zone and Yangubakoya alluvial sediments.

  The second anomaly occurs across the extensive nodular duricrust surface some 200 metres west of the Main Zone between the faulted-out BIF ridge and the Bacanga stream. One line of RC drill holes (11120N) cuts across part of this anomaly. However, this anomaly may be the product of sampling across a valley feature, which has collected gold derived from wasting of duricrust over the Main Zone.

- North of the Bacanga stream, the continuation of the Main Zone extends for 1.5km to the northwest. The >50ppb soil halo is some 250m wide within which are irregular areas of more elevated gold values up to >1ppm Au. This area is underlain by extensive duricrust overlying schists and BIF ridges. Some tourmaline float was noted during field mapping but its occurrence does not appear to be extensive.

- Lastly, a new anomaly has emerged north of the Bacanga, some 600 metres east of the Main Zone Trend. The +50ppb halo, which defines the anomaly, is about 500 metres in length and straddles a BIF ridge. Internally the anomaly has a number of values >100ppb.

4.5.2.4 Geological and Geomorphological Mapping and Trenching Programs

4.5.2.4.1 Geological and Geomorphological Mapping

AXMIN, with the assistance of Aurafrique geologists, carried out a two stage geological and geomorphological mapping program over all five grid areas at a scale of 1:10,000. The following geological description of the various grid areas is taken from Bills (2000) and Bills (2001) and is further described in detail in Section 4.6.

4.5.2.4.2 Trenching Program (2000)

Towards the end of 2000 and during January 2001, AXMIN carried out a trenching program on the following grid areas in order to test several Au in soil anomalies obtained from the in-fill soil surveys. The trench locations are listed below:

Grid Name	Number of Trenches	Coordinates	Length
French Camp Extension	2	471000/682000 471100/681600	50 m each
Ndassima	2	476300/677600 476600/677500	50 m each
Ao	1	474500/667000	50 m
TOTAL	**5**		**250 m**

All trenches are < 1.0m in width and vary in depth from 2.0 to 3.0 m, however none have been mapped or sampled by AXMIN.

4.5.3 GEOPHYSICS

4.5.3.1 Re-interpretation of Asquith Resources Inc.'s Airborne Geophysics and Landsat Data

In 2000, AXMIN carried out reprocessing and interpretation of Asquith's airborne magnetic and radiometric data covering the Bambari Permit (see Appendix B). This work allowed for the compilation of a pseudo-geological map detailing a major NW trending anastomosing / sigmoidal sinistral shear zone in folded BIF rich lithologies. Undeformed acid intrusives and deformed intermediate granitoids were identified and are distributed around the shear zone margins and within the shear zone respectively. AXMIN have also interpreted the occurrence of two deeply buried intrusives within the shear zone (see Figure 4-24). Three fault sets were also identified by AXMIN striking 320°, 000° and 050°. Of the three fault sets, the 050° fault set is the youngest and the only one seen traversing into the Proterozoic sediments.

In comparing the interpreted pseudo-geological map with the known distribution of gold occurrences / anomalies, a number of spatial relationships were observed by AXMIN: 1) gold anomalies are associated with anomalous U counts in folded BIFs, 2) east-west striking splays within the main shear zone, 3) gold anomalies associated with the deeply buried intrusives and 4) gold anomaly associated with a 000° fault (f_1) (see Figure 4-24).

4.5.3.2 AXMIN Ground Magnetometer Surveys

From October to December 2000, AXMIN carried out a 113 line km ground magnetometer survey over the Passendro (83.0 line km) and French Camp (30.0 line km) grid areas (see Figure 4-25 and 4-26). Two Overhauser Proton Magnetometers were used in the acquisition of the magnetic datasets. The Overhauser magnetometers have a quoted precision of 0.01 nT and a quoted repeatability of 0.2 nT.

4.5.3.2.1 Passendro – Main Zone Target Area

A total of 83 – 1.0 km long magnetic profiles, totalling 83.0 km were carried out by AXMIN over the Passendro Main Zone Area. Profile spacing was at 40.0 m and station readings were collected at 10 m centres (Figure 4-25). The following interpretation of the Passendro ground magnetic survey is taken from Farrington (2001):

Passendro Survey Area:

Lithologies:

"Using the above maps it has been possible to define and delineate the extent of four distinct magnetic lithologies, all labelled on the interpretation map:

"L_1: This magnetic terrain contains a number of moderate amplitude magnetic lineations within a low amplitude background field. This region is interpreted as being underlain by intercalated narrow BIF units and sericite schists.

"L_2: This magnetic terrain is characterised by the extreme smoothness of the overlying TMI. Only rarely can very low amplitude, high frequency magnetic lineations be seen. This unit is interpreted as representing a magnetite poor lithology, and the absence of internal magnetic features is indicative of a homogenous lithology. This unit is interpreted as consisting of massive sericite schist. Within L_2, isolated regions of magnetic lithology L_1 are seen, for example at 469,800E / 684,800N.

"L_3: Within this delineated magnetic terrain seen in the southern half of the area of investigation, extending from the south – east westward to 468,400E, a series of short wavelength, sub – parallel, high amplitude linear anomalies with a short spatial extent can be seen. Measured TMI anomaly amplitude variations within this area are extremely high, with single anomalies having max – min amplitudes greater than 10,000nT. This is suggestive of a series of thin, parallel, highly magnetic lithological beds within a magnetite poor lithology, for example, specularite schist units in sericite schist.

"B_1, B_2, B_3: Three long wavelength, high amplitude magnetic lineations striking WNW – ESE over considerable distances, greater than 2km in the case of B_2 seen at 468,400E / 686,000N. In the TMI Grid, these anomalies show a deep negative central anomaly with lower amplitude positive anomalies on either side of the central low. These three magnetic features are interpreted as being sourced by massive, thick BIF units.

Structures:

"Within the Passendro survey area three principle structural trends have been interpreted based on anomaly offsets, and linear anomaly terminations:

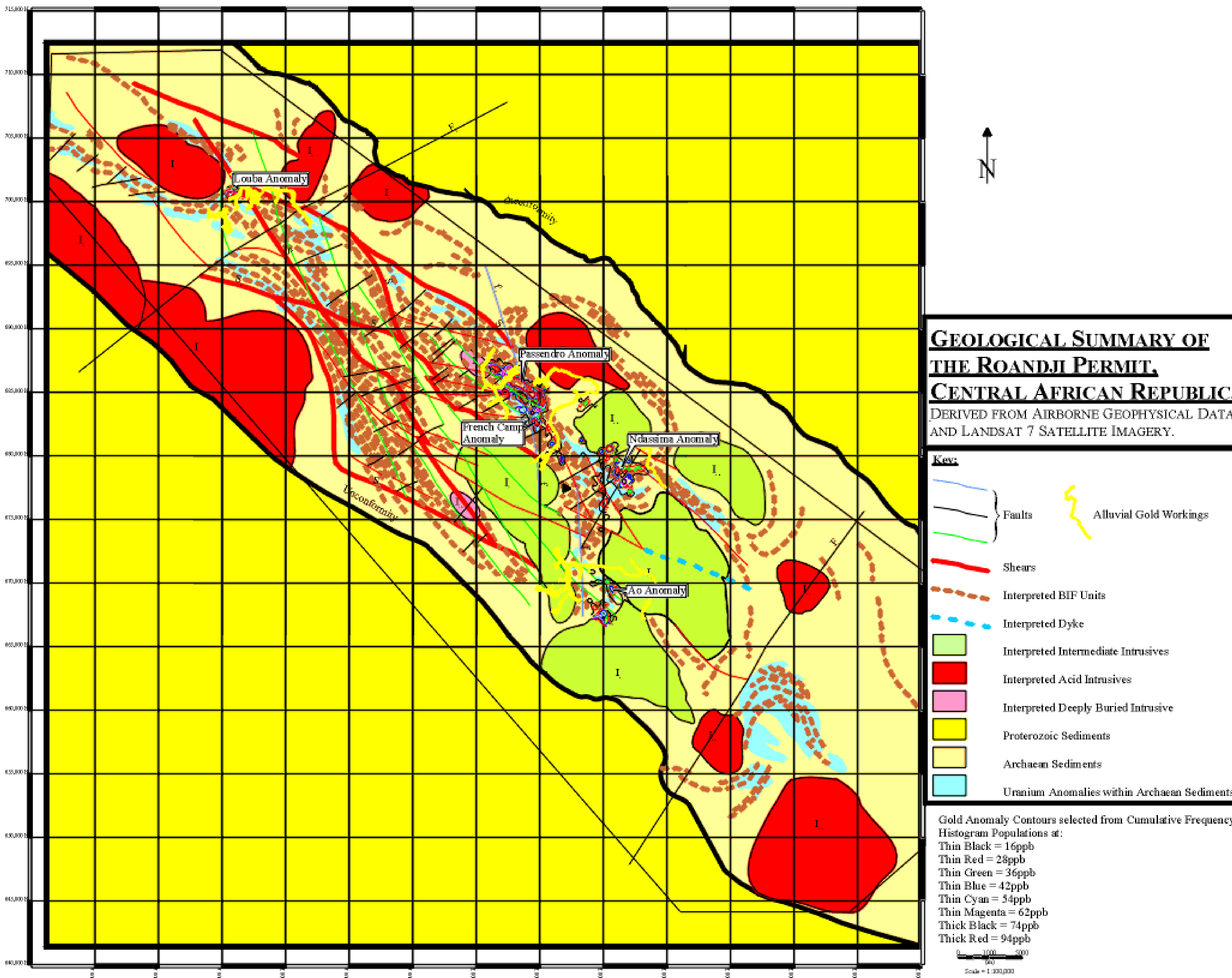
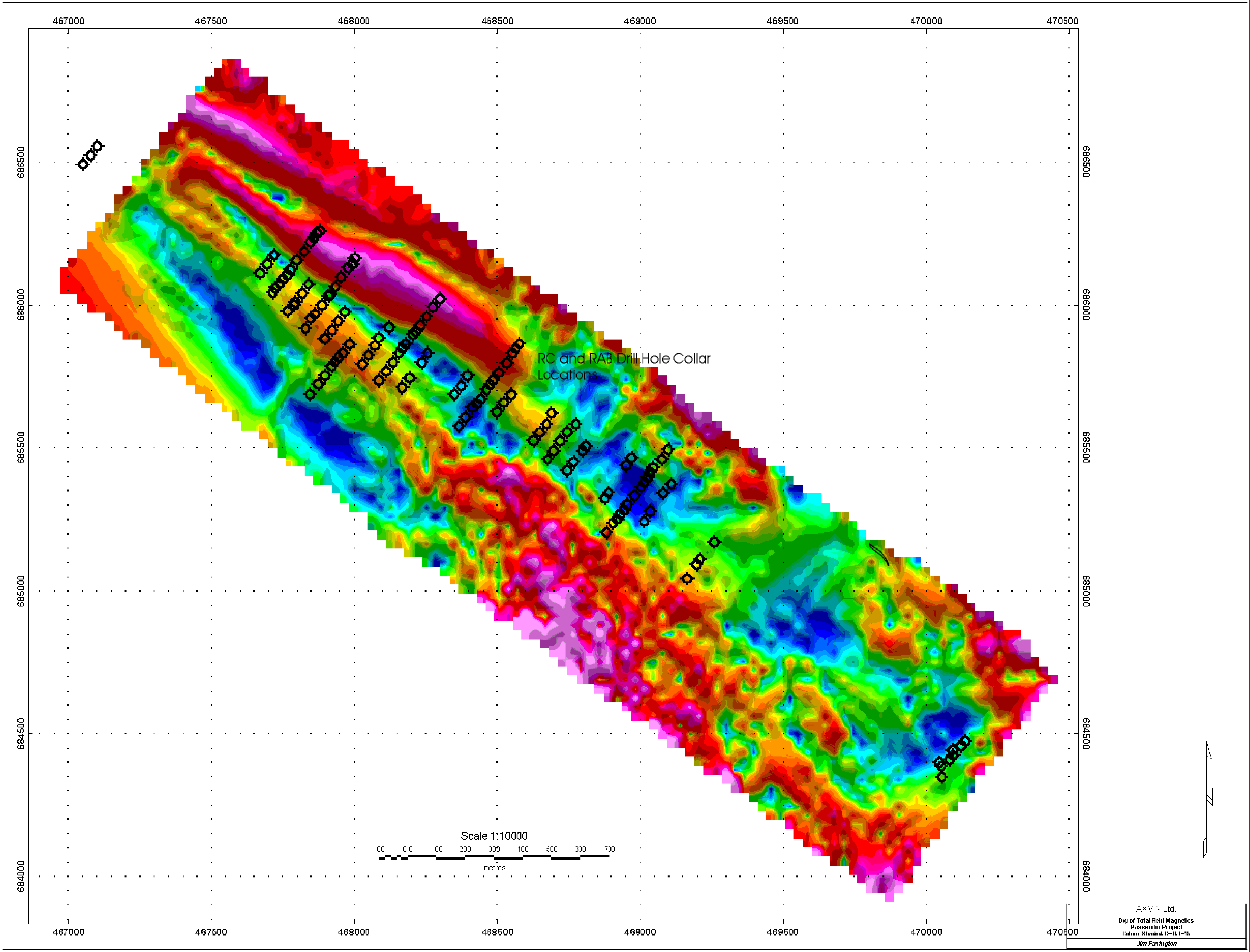


Figure 4-24

Courtesy of AXMIN Limited

A.C.A. Howe International Limited

Figure 4-25. Total Field Magnetics - Passendro Main Zone



"$f_1 - f_3$: Three structures delineated within the area of study striking approximately N – S, seen terminating and offsetting magnetic terrains. Fault f_1, interpreted approximately along the easting 468,500E is interpreted to have experienced considerable sinistral motion across it, terminating the interpreted massive BIF unit B_2 in the east. Faults f_2, and f_3 are interpreted as being more minor features with small dextral offsets across them.

"$F_1 - F_6$: Extensive structures striking approximately E – W all interpreted as showing sinistral offset across them apart from the structure labelled F_2 which shows evidence for dextral offset. These structures appear to offset the structures described above and must therefore post – date them.

Structure S: This structure is interpreted as defining the northern margin of the magnetic terrain L_3, striking approximately 135º. Of all the interpreted structures described above this is the most speculative, however, the sudden, sharp contact between the highly magnetic unit L_3 and the magnetically quiet unit L_2 is best explained by a structure, however this could be a bedding contact.

(Note: none of the abovementioned interpretations are plotted on Figure 4-25)

4.5.3.2.2 French Camp Target Area

A total of 30 – 1.0 km long magnetic profiles, totalling 30.0 km were carried out by AXMIN over the French Camp Grid Area. As at Passendro, profile spacing was at 40.0 m and station readings were collected at 10 m centres (Figure 4-26). The following interpretation of the French Camp ground magnetic survey is taken from Farrington (2001):

French Camp Area:

Lithologies:

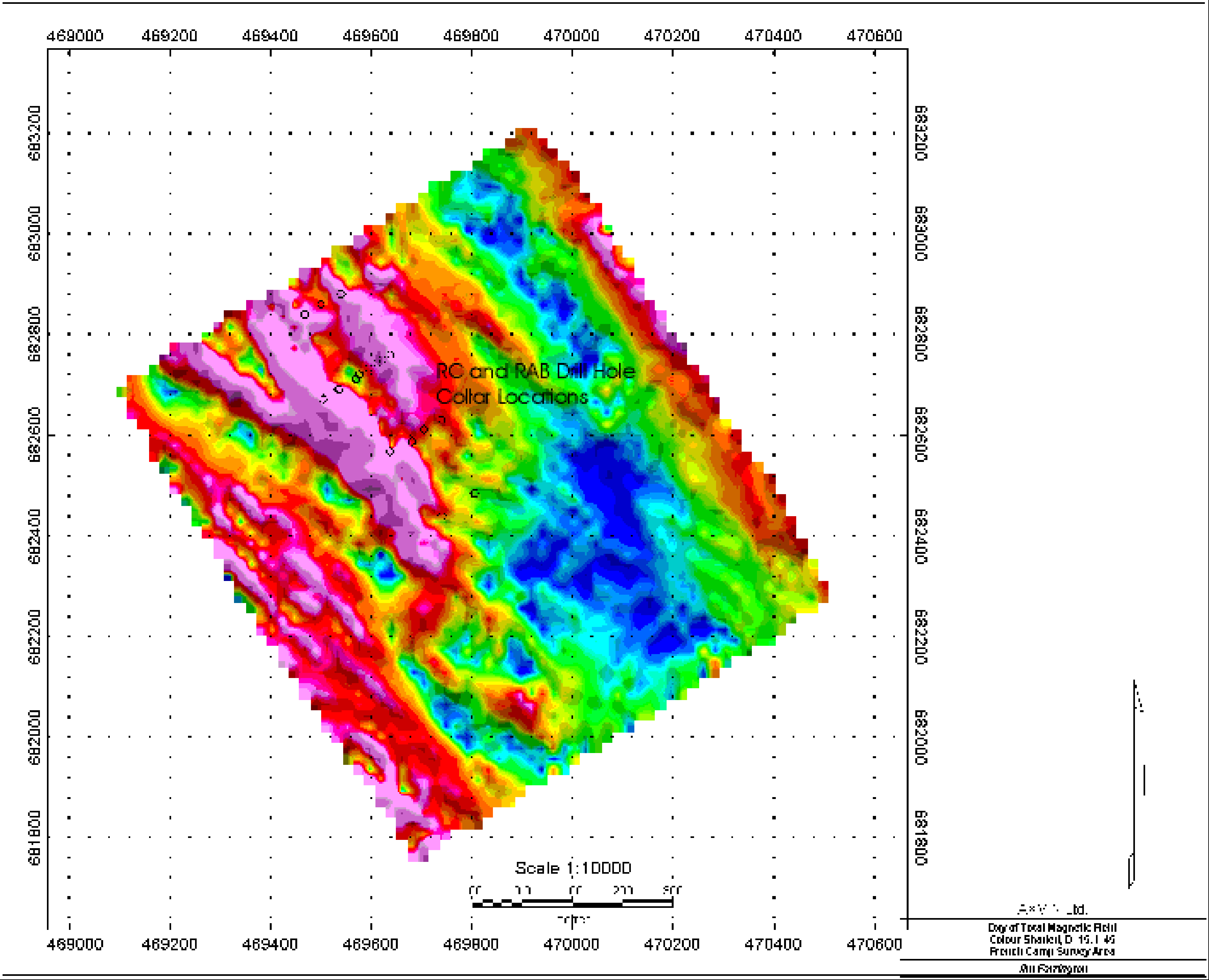
"Three distinctive magnetic terrains have been mapped and delineated within the French Camp Study area:

"L_1: Defined by a magnetically very smooth region in the east central region of the surveyed area containing few very short, low amplitude magnetic anomalies, interpreted as a homogenous sericite schist unit.

"L_2: Large amplitude parallel linear anomalies seen in the Analytic Signal and are interpreted as thick massive ironstone beds defining a fold closure to the south – east with a fold axis of approximately 145º, and the fold nose at 469,900E / 682,100N with interbedded sericite schist units.

"L_3: Within this magnetic terrain delineated in the north – east and south – west of the area of investigation, numerous parallel, moderately high amplitude, short wavelength magnetic lineations are visible, striking approximately NW – SE. Interpreted as thin magnetic units, BIF with

Figure 4-26. Total Field Magnetics - French Camp Target Area



interbedded non – magnetic sericite schist units.

Structures:

“Five structural sets have been defined within the French Camp area of investigation, based on linear anomaly terminations and dislocations, and pinching out of parallel magnetic lineations:

“Structure S: Interpreted as a shear zone defining the northern margin of the southern occurrence of magnetic lithology L_3 striking approximately 145º.

“Structure F’: Striking approximately 135º parallel to bedding, this structure appears to cut through the BIF units in the west of lithology L_2, juxtaposing two BIF units with differing strike directions.

“F_1 – F_2: Two parallel structures striking approximately 130º seen at 470,000E/ 682,700N and 470,000E / 682,500N respectively. Structure F_1 separates lithology L_3 in the north from L_1 and L_2 to the south. Dislocation of the magnetic lineations in L_2 interpreted as BIF units, by the interpreted structure F_2 suggests a dextral sense of motion across it.

f_1 – f_2: Two parallel structures seen at 470,100E / 682,600N and 470,200E / 682,250N respectively are interpreted striking approximately 035º, cutting through all the structures detailed above except the structure S. Offsetting relationships across the structure labelled f_1 indicate that the sense of displacement across this structure was dextral.

“Fault F’: This small structure striking approximately 015º is seen at 469,600E / 682,400N offsetting structure S and the interpreted BIF units in the magnetic lithology L_2 in a dextral fashion.”

(Note: none of the abovementioned interpretations are plotted on Figure 4-26)

4.5.4 AXMIN Resource Estimation of the Passendro Main Zone and French Camp Target Areas

4.5.4.1 Passendro - Main Zone Target Area

AXMIN had completed a preliminary in-situ gold resource estimation of the Passendro Main Zone (Figure 4-16). AXMIN completed this resource estimation in order to ascertain the extent of the potential resource as well as to obtain a better understanding of the mineralization in general. AXMIN’s resource estimate was a “hand calculation” using geologically interpreted cross-sections and plan maps. The lower cut-off grade used in the calculation is 1.0 g/t Au with a minimum width of 1.0 m and a specific gravity of 2.0 was also used in the calculation. According to Bills (2000), AXMIN’s resource estimation was calculated from mineralized zones that extended down dip to a maximum of 20 m below any intersection. Bills (2000) indicated that the true vertical depth of the resource estimation varies from 25 to 40 m along the mineralized zone with a mean depth of 30 m.

According to Bills (2000), the resource is classified as an inferred resource. Howe would conclude that at this stage of drilling, there is insufficient knowledge of the continuity and distribution of values to meet the constraints of an inferred resource as defined in National Instrument 43-101.

Table 4-9 Summary gold resource estimate of the Passendro Main Zone.

	Main Zone – north of fence lines 10880N to 11520 N	Main Zone – south of fence lines 9920N to 10640 N	Total
Tonnes	608,800	1,047,440	1,656,240
Average Au grade (g/t) – arithmetic	2.70	3.50	3.20
Ounces Gold	52,846	117,860	170,707

4.5.4.2 French Camp Target Area

A total of 13 RC drill holes were drilled along four, 160 m spaced cross-section fences in order to test the 50 ppb Au soil anomaly previously defined by Asquith in 1999. According to Bills (2000), potentially economic intersections were identified in RC drill holes along fences 140N and 300N whereby apparent true width mineralization ranged from 8 to 15 m and that the gold mineralization zones dip 50° SW. The gold mineralization is hosted in a NW trending shear zone that occurs along the contact between BIF and chlorite schist.

As with the Passendro Main Zone, AXMIN conducted a preliminary resource calculation of the gold mineralization encountered at the French Camp Target Area. AXMIN's resource calculation was conducted in the following manner:

- Resource estimated to a vertical depth ranging from 40-60 m;
- Mineralization was extrapolated at 80 m from fences;
- Down-dip extrapolation was limited to 20 m beyond the deepest intersection;
- Lower cut-off grade 1.0 g/t Au was used with no upper cut-off and;
- A specific gravity of 2.2 was used to reflect the dense nature of chemically weathered BIF.

Table 4-10 Summary gold resource estimate of the Passendro French Camp Target Area.

	French Camp (inferred)
Tonnes	563,000
Average Au grade (g/t) – arithmetic	3.22
Ounces Gold	58,281

Howe has not reviewed the resource calculation, however due to the amount of RC and RAB drilling completed to date, AXMIN's calculations serve as an exploration tool to outline additional zones to drill test. Howe does note that the preliminary resource calculation is based solely on RC drill results and that core drilling must be completed (approximately 10% of the holes) before any systematic resource calculation be completed within the CIM resource / reserve guidelines (CIM Standing Committee, 2000).

4.6 MINERALIZATION AND EXPLORATION TARGETS

4.6.1 Passendro Main Zone and French Camp Target Areas

The following geological descriptions are taken from Bills (2000, 2001), which reflect the most recent geological mapping of the various target areas identified to date by AXMIN:

4.6.1.1 Passendro Main Zone Target Area

The Passendro Main Zone Target Area consists of a thick monotonous package of NW-SE trending (120° - 140°) and SW to WSW dipping (60° to 70°) saprolitised chlorite schists which are interpreted by AXMIN as intermediate-mafic volcaniclastics, bounded to the SW and NW by NW -SE trending (120° to 140° and dipping 60° to 70° SW and WSW) BIF units which form prominent ridges (Figure 4-15). Along both down slope flanks of the BIF ridges extensive duricrust aprons are developed whereby these laterite aprons are typified by cemented BIF scree.

The saprolitised chlorite schist is pale red-pink-buff white to pale green in colour and consists of sericite, clay minerals (kaolinite, illite, smectite/chlorite and smectite/vermiculite) and fine grained quartz. Areas of isolated float and outcrop of BIF and "quartzite" (recrystallised chert horizons) occur as thin intercalations within subcrop of saprolitised chlorite-sericite schist.

The following lithologies have been identified by AXMIN within the Main Zone Target Area from surface float and exposures, trenches and RAB and RC chips (Bills 2000a):

4.6.1.2. Banded Iron Formation (BIF):

This unit is a massive oxide facies (magnetite-hematite) BIF with fine granular (often euhedral octahedral) magnetite crystals with only minor silica content, grading to itabarite BIF with increased silica content. Massive BIF also alternates with magnetite / hematite – bearing quartzite bands. Quartzite is used by AXMIN as a field term but may represent recrystallised chert. A variety of itabarite is specularite schist that occurs locally and is comprised of alternating micaceous hematite and recrystallised chert bands.

4.6.1.3 Chlorite schist:

This unit contains varying amounts of quartz. Near surface, this unit has been weathered to red-brown to pink to buff-sericite-clay saprolite with varying hematite staining. Preserved fragments in vermiform laterite is hematite stained while saprolite from RAB and RC holes is bleached –

pink to buff to white. There is a gradation from fine clay rich saprolite with low silica content to more quartz-rich material.

4.6.1.4 Recrystallised chert / quartzite:

Massive, possibly recrystallised chert is red-brown to pale red brown (hematite stained) to white (when freshly broken) with a clearly granoblastic fabric. Grain size is 0.25 to 1.5 mm.

Surface mapping by AXMIN also outlined a 1.0km long lens shaped zone of tourmaline (veinlets ± quartz) in the saprolitised chlorite-sericite schist (see Figure 4-15). This tourmaline zone is coincident with the axis of the auriferous termitaria geochemical anomaly.

Structural features were rarely observed during the geological mapping program, however, a steeply plunging to vertical lineation was observed by AXMIN geologists on BIF foliation surfaces exposed in Asquith's Trench 36 and elsewhere within the target area. This lineation is interpreted by AXMIN to be associated with a prominent joint set or "ladder veins" (filled with Fe-oxides) which is always developed normal to the lineation. As well, moderate to steep plunges have been noted by AXMIN geologists on the parasitic fold closures in the BIF outcrops along the flanking ridges. According to AXMIN, the BIF-schist package has been folded isoclinally about a NW-SE axis and then folded more gently normal to this direction to produce low amplitude, long wavelength open folds.

Based on the surface geological mapping and completed RAB and RC drilling on the Passendro Main Zone Target Area, AXMIN has interpreted that the gold mineralization appears to be associated with iron impregnated rocks, zones of tourmaline – quartz veinlets in saprolite and unremarkable zones within massive saprolitised chlorite-sericite schist. In addition, AXMIN has reported that abundant visible gold in RC sample concentrates is often associated with a subtle Fe-oxide change (red-yellow-brown ochre) related to the fluctuation of the water table that occurs between the wet and dry seasons. It is suggested by AXMIN that supergene effects may have contributed significantly to gold mineralization within the saprolitised schist units.

4.6.1.5 Passendro – French Camp and French Camp Extension Target Area

"The geology of the French Camp Extension is represented by massive BIF units intercalated with sericitic schist units (see Figures 4-22 and 4-27). The BIF unit dominates the southern part of the area (up to line 1600S) with some sericitic schist developing in the western part. North of the 1600S the geology is similar to French Camp, that is a sericitic schist unit flanked by two BIF ridges. Some specularite schist units are present at the contact between the BIF and the sericitic schist units, representing a transition between the two. There is a large area covered with quartzite (metamorphosed chert?) around line 2000S. A number of ESE–WNW trending faults are interpreted cutting across the block, creating a block displacement, some sinistral (to the North) and some dextral (to the South).

4.6.2 Ndassima Target Area (with Extension Zone)

According to Bernier (1999), the Ndassima target area is underlain by a sequence of intermediate – mafic schists with two prominent geophysically interpreted folded banded iron formation units with fold axis trending N-S (see Figure 4-27). Subsequent detailed geological mapping by AXMIN in 2000 outlined four main units in a succession from West to East as follows:

- BIF unit which starts as a massive or finely banded BIF and gradually passes into Quartz-Iron BIF and Quartzite (recrystallised chert);

- Greenschist unit (basic), which includes amphibolite, talc schist, gabbro, amphibolitic schist and chlorite schist;

- BIF unit, gradually passing into quartzite and;

- Gneiss unit comprises intermediate to acid intrusives (?), garnet schist and some lava flows composed of quartz, feldspar, biotite (chlorite), muscovite and garnet.

Some of the quartz-rich and iron-rich BIF is stockworked in the region of lines 7800S to 7600S.

In addition, there are several ESE to WNW trending faults cutting across the area, the northern being sinistral and the southern one being dextral.

The Ndassima Block 1 area is essentially flat with a small hill on lines 400S and 800S, which is comprised of BIF, whereas the western part of the grid is underlain by the Djoubissi granite.

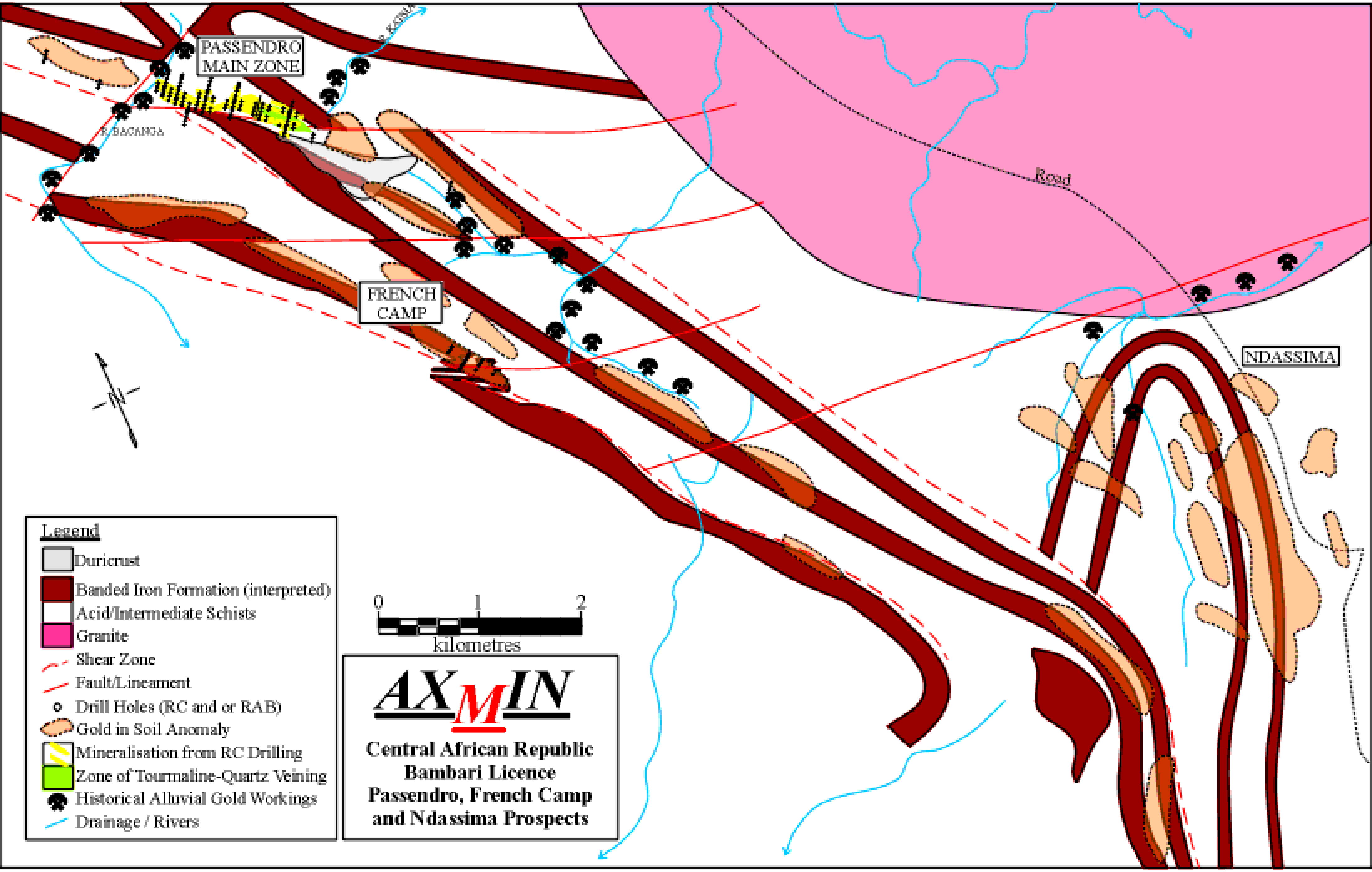
4.6.3 Other Gold Target Areas

4.6.3.1 Ao Grid Area

The geology of Ao area is represented by a massive to finely banded BIF unit with its gradual succession into ferruginous quartzite, which form ridges, and an intrusive/volcanic complex, present in the southwestern and central part of the grid. The intrusive/volcanic complex is quartz-rich, massive to finely banded rocks with some chlorite. A granite intrusion is present in the south of the area. Around line 11400N on the base line there is an area with numerous black quartz-tourmaline vein fragments around a small hillock. The tourmaline genesis is thought to represent a contact phenomenon between the granite and the country rocks.

Between the BIF ridges the area is extensively covered with cuirasse and soil. A dolerite intrusive has been intersected by lines 13400N, 13600N and 13800N around 11300E. In the central part of the grid there was intersected a contact between BIF and metasedimentary rocks.

Figure 4-27 Geology of the Passendro, French Camp and Ndassima Target Areas



Courtesy of AXMIN Limited

4.6.3.2 North 1 (N1) Grid Area

The geology of North 1 Extension grid consists of a BIF unit in the northeastern part. The BIF is disposed in a few narrow parallel ridges separated by linear depressions and underlain by well-developed red residual soils with abundant aardvark holes. This is interpreted as a thick unit of sericite schist flanked on both sides by BIF, and may account for the K-high. The area is essentially an elongated plateau and falls just outside the original Asquith grid.

4.6.3.3 Louba Grid Area

The geology of the Louba grid has not been mapped in detail by AXMIN, however, based on AXMIN's pseudo-geological map (see Figure 4-24), the Louba grid is underlain by a sequence of Archean metasediments and folded BIF horizons, which are transected by the NW trending shear zone (S_4) and a NE trending fault (F_1). The Louba Au soil anomaly is also adjacent to the geological contact of an interpreted acid intrusive (I_1)

4.6.3.4 Agoudou-Manga Target Area

The geology in the vicinity of the Agoudou-Chantier gold showing consists of a central NE-trending unit of oxide-facies banded iron formation (BIF), a tonalite intrusive adjacent to the southeast, a mafic metavolcanic unit to the north, and a sedimentary quartzite and quartz-mica schist unit to the Southeast of the tonalite intrusive (Figure 4–14). All rocks in the area are cut by quartz-feldspar porphyry and silicified intermediate to mafic dikes generally trending 340° (Buro, 1998). The quartz-feldspar porphyry dikes are commonly foliated, and locally sheared, giving a schist-like appearance to the rock. The Agoudou-Chantier primary gold occurrence is hosted in a 340°-trending and NW-plunging, 20-60 cm wide quartz vein.

Buro (1998) conducted a structural interpretation of the Agoundou-Manga Target Area and indicated that a large block centred on the Agoudou-Manga area has undergone a clockwise rotation of about 45°. Buro (1998) suggested that this setting originated from the emplacement of the late Gralindji tonalite to the northwest of the Agoudou and Goubadjia areas. This pluton has probably truncated the belt stratigraphy along a major NE fault on the northwest but has pushed aside all the lithologies on the southeastern contact. Both the northwest and the northeasterly trending folds are still perfectly recognizable, like in the rest of the permit area, but have been brought into north-south and east-west attitudes, respectively.

The Goubadjia and the Agoudou-Manga prospects are situated near the south end of the Bandas greenstone belt, within a synform interpreted by J.L. Poidevin in the Goubadjia River area. The Goubadjia prospect is located 12 km to the north of the village of Agoudou-Manga and some 5 km to the north-northeast of the Agoudou-Manga artisanal mining site and Asquith Resources' grid area.

The synform is defined by alternating meta-basalt and banded iron formation intruded by gabbro sills. It is highly visible in the airborne magnetic data. A plunge to the south is implied by the map pattern and its axial plane is N-S trending, which corresponds to the early (F1) northwesterly folds outside of this structural domain.

The gold prospect lies at the contact of a 1,200 m wide, northeasterly trending Banded Iron Formation-Volcanic rocks unit with tonalite. The iron formation sequence is festooned by mafic meta-volcanic rocks on the west and along the Baidou river on the north, as indicated by the magnetic map and field mapping (Figure 4-6).

4.6.5 Topa Iron Ore Discovery

The following is taken from Bills (2000b):

“In May 2000, during the course of regional gold exploration within the 2,000 km² Bambari Permit, AXMIN geologists discovered a significant body of massive, specular hematite-magnetite rich rock. Initial sampling and analysis of the hematite-magnetite rock by AXMIN indicate an iron content of >68 wt % Fe, together with very low silica, alumina and P_2O_5 content.

“The Topa iron ore occurrence is located in the northern part of the Bambari Permit some 20 km north west of the Roandji gold project. The name Topa means stack or tor in the local Bandas language and is so named because of a 40 metre high tor pinnacle, which protrudes from the summit of the Topa hill mass and is composed of a solid mass of hematite-magnetite rock.

“Kaga Topa is an oval hill mass that rises up to 240 metres above the surrounding terrain and measures some 3.5km by 2km. The top of the hill mass is at an altitude of 790 metres, the base around 550 metres a.s.l. The summit areas are covered by extensive pavements of indurated laterite, which contain clasts and blocks of the massive Fe-oxide rock, while the erosional break-away slopes at the edge of these plateau-like features are strewn with huge blocks of massive black, crystalline hematite-magnetite rock (Plates 4-1, 4-2, 4-3).

“During the December quarter 2000, AXMIN geologists mapped the hill mass at a scale of 1:5000 and three ground magnetometer profiles have been run through the centre of the deposit (Figures 4-28 and 4-29). Mapping lines were spaced at 400 metre intervals and whereas the three magnetometer profiles were spaced at 800 metre intervals. Mapping of outcrop and the distribution of massive iron rock fragments embedded in indurated laterite surfaces suggests that there are at least two subparallel, E to ESE trending iron-rich units some 300-400 metres wide and up to 2,000 metres long. These two units may be the limbs of a tight fold, or a single faulted unit. The magnetic data and the topography support the interpretation of a tight synform with a fold closure along the eastern flank of Topa.

Typically, the hematite-magnetite rock is a massive, metallic grey to gunmetal grey in colour, fine to medium grain unit. In-situ outcrop exposures of this unit contain distinct individual Fe-rich bands /beds whereby the metallic grey bands are thinner than the gunmetal bands and exhibit ductile deformation (i.e.; folding) due to sediment slumping prior to consolidation or by tectonic deformation (Plate 4-4).

A total of ten grab samples were collected by AXMIN from various areas within the Topa grid area for Fe analysis using OMAC's lithium metaborate fusion method. Table 4-11 summarizes the results obtained from the Topa grid area.

Table 4-11 AXMIN's Topa Analytical Results by lithium metaborate fusion (OMAC)

Sample No.	Fe %	Si %	Al %	P % (from ICP)	Mn %
17865	69.0	0.22	0.27	0.021	0.007
17867	64.2	0.94	0.81	0.016	0.007
17869	62.6	0.19	0.23	0.014	0.004
17870	63.8	1.29	1.02	0.034	0.005
17871	68.6	0.28	0.31	0.019	0.006
17872	67.8	0.98	0.53	0.016	0.011
17875	68.2	0.43	0.42	0.018	0.009
17876	67.4	0.68	0.66	0.028	0.016
17877	68.2	0.62	0.63	0.043	0.070
17899	67.2	0.57	0.57	0.020	0.008
17899 repeat	66.7	0.62	0.55	0.029	0.014

The analytical method for the above elements is by lithium metaborate fusion followed by AAS; the method is considered not as accurate for Fe determination as XRF but if anything slightly underestimates Fe. Analysis of P and the ICP suite of elements are expected. The oxide percentages above have been calculated on the basis of the principal Fe oxide as hematite; any residual magnetite would mean a higher Fe content.

Subsequent to the above analytical results, all of the above mentioned sample material were re-analysed by XRF by a major mining company. Table 4-12 is a summary of the results obtained by the major mining company from the Topa grid area.

Table 4-12 XRF Assay Data from Major Mining Company

IDENT	AXMIN No.	Fe	Al2O3	CaO	Fe2O3	K2O	MnO	Na2O	P2O5	S	SiO2	TiO2	LOI	MgO	
UNITS		%	%	%	%	%	%	%	%	%	%	%	%	%	
Analysis			XRF4	XRF4	XRF4	XRF4	XRF4	XRF4	XRF4	XRF4	XRF4	XRF4	XRF4	XRF4	
Detn.Limit			0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
5857218	17865	69.2	0.37	0.06	98.9	0.01	0.02	<0.01	0.04	<0.01	0.03	0.02	0.27	<0.01	99.7
5857219	17867	66.6	1.61	0.07	95.2	0.34	0.02	<0.01	0.02	<0.01	1	0.05	0.51	<0.01	99.6
5857220	17869	69.7	0.28	0.03	99.6	<0.01	0.01	<0.01	0.02	<0.01	<0.01	0.02	0.06	<0.01	100
5857221	17870	65.6	1.93	0.05	93.8	0.52	0.01	<0.01	0.08	<0.01	2.52	0.06	0.62	<0.01	99.6
5857222	17871	68.8	0.42	0.1	98.4	0.07	0.02	<0.01	0.05	<0.01	0.3	0.02	0.17	<0.01	99.6
5857223	17872	67.6	0.9	0.05	96.6	0.04	0.02	<0.01	0.03	<0.01	1.45	0.05	0.36	<0.01	99.5
5857224	17875	68.2	0.84	0.05	97.5	0.11	0.02	<0.01	0.06	<0.01	0.73	0.04	0.28	<0.01	99.6
5857225	17876	67.4	1.26	0.05	96.4	0.06	0.02	<0.01	0.05	<0.01	1.21	0.04	0.48	<0.01	99.6
5857226	17877	68	0.85	0.04	97.2	0.17	0.04	<0.01	0.07	<0.01	,73	0.04	0.37	<0.01	99.5
5857227	17899	67.6	1.13	0.07	96.7	0.23	0.01	<0.01	0.04	<0.01	1.07	0.05	0.33	<0.01	99.6
Average		67.9	0.87			0.17	0.02		0.04		1.07				
R5857221		65.6	1.93	0.05	93.8	0.51	0.01	<0.01	0.08	<0.01	2.5	0.06	0.64	<0.01	99.6
S680_1		58.1	1.21	0.61	83	0.1	0.03	0.2	0.03	0.61	8.85	0.08	1.19	0.15	96.1

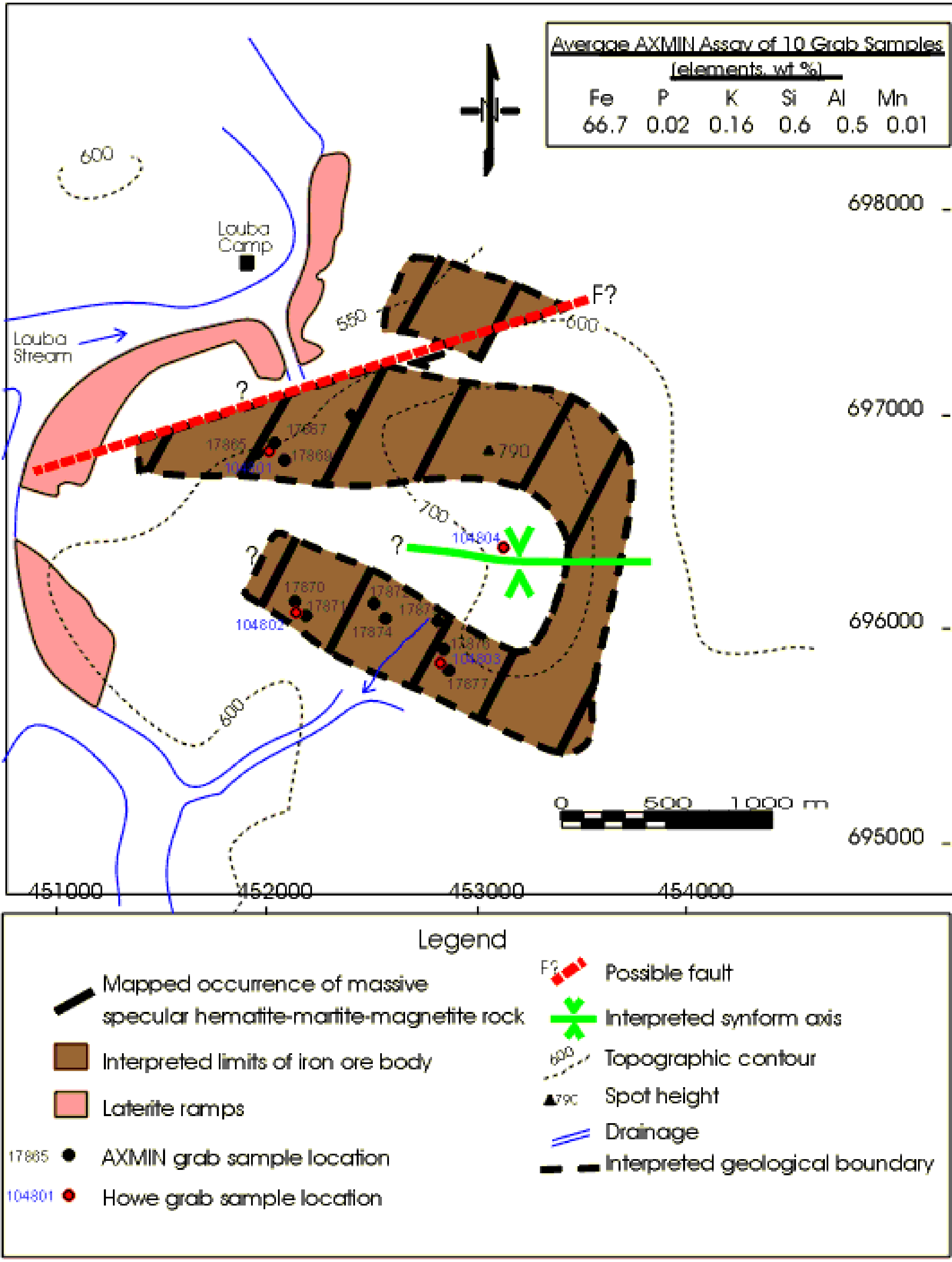
Plate 4-1 Topa Pinnacle – Topa Iron Discovery

Plate 4-2 Iron ore grab sample (Howe sample 104802) collected at the base of the Topa Pinnacle

Plate 4-3 Indurated lateritic cap consisting of angular fragments of iron ore (photo taken near base of Topa Pinnacle

Plate 4-4 Massive medium to coarse grained iron formation (Howe sample 104803) collected at the Boulder Field area – Topa Iron Discovery

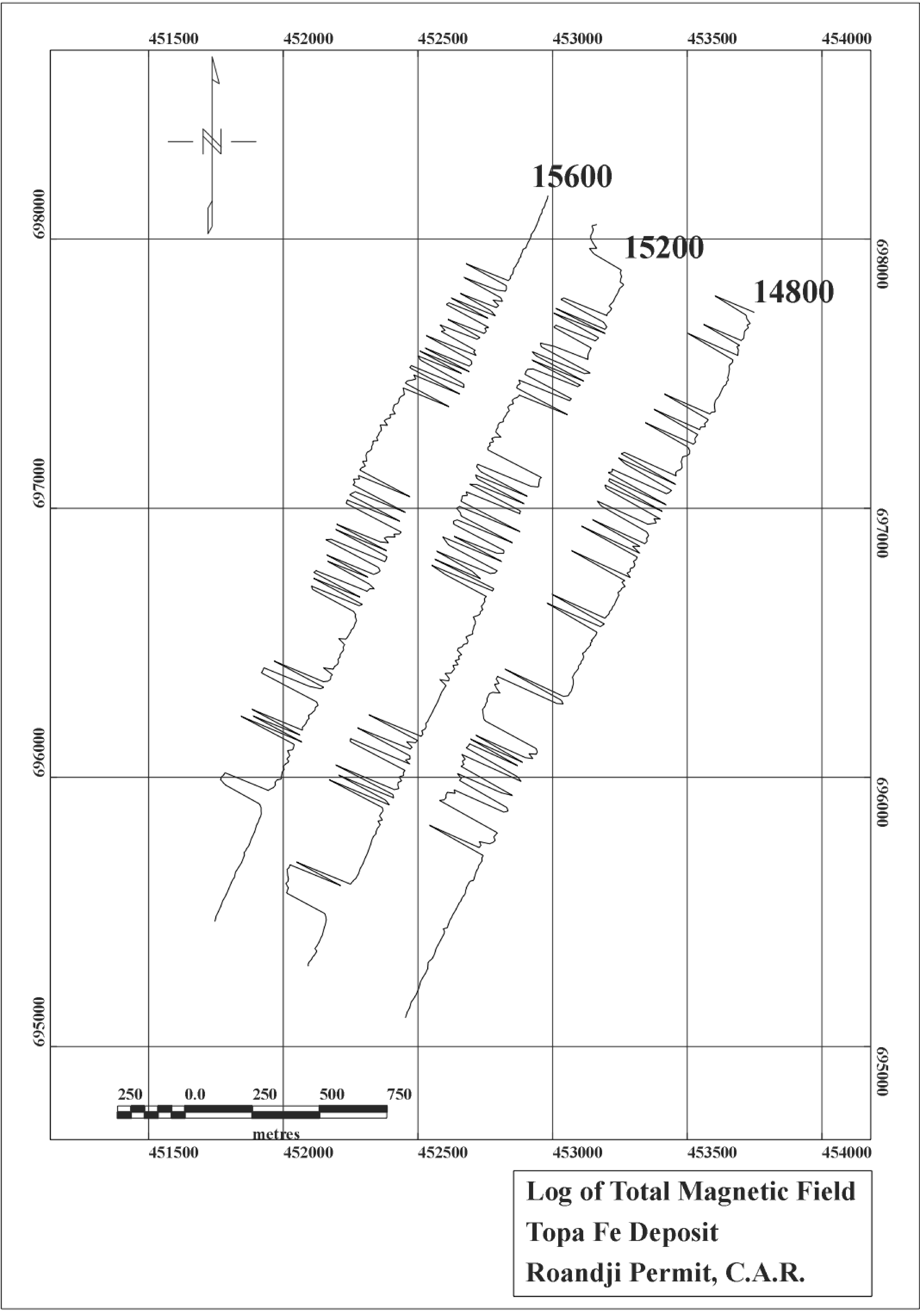
FIGURE 4-28 Geology of the Topa Iron Discovery Area



Courtesy of AXMIN Limited

A.C.A. Howe International Limited

Figure 4-29 Log of Total Magnetic Field (from profile data)



4.7 SAMPLING METHOD, PREPARATION, ANALYSIS AND SECURITY

The sampling method, preparation and analysis of Asquith's termitaria, soil-lag, bedrock and percussion drilling sampling programs are briefly described in Section 4.4.2.3, 4.4.2.4.1, 4.4.2.4.2 and 4.4.3.1 respectively.

The following sampling methods, preparation, analysis and sample security of AXMIN's RC and RAB drill holes is described in detail and taken from Bills (2000):

4.7.1 Sample Preparation at drill site

"At each drill site an area for sample splitting, RC chip logging and panning of samples was established. A tarpaulin was erected to provide shade and cover from rain.

"Throughout Phase 1 and 2 RC and RAB samples were collected at 1 metre intervals. In the case of RC samples each sample was collected in a large numbered and ticketed plastic bag (24"*36"), which was held underneath the cyclone spigot by a drill helper. Each sample was then weighed and the weight noted on a "Sample Record Sheet" (completed by a technician). In addition, the moisture content was noted.

"The diameter of the RC and RAB holes is nominally 5 inches (12.7 cm) and each 1 metre sample has a theoretical sample volume of 12.7 litres. Depending on saprolite density, (probably 1.8-2), nominal sample weight should be some 23-25 kg. Throughout both drilling programme however, there was considerable variation in sample weight, from as little as 7 kg up to 30 kg. The density of the saprolite is fairly consistent however, and thus the variation in sample weight is due to either over sampling or poor recovery. This is a standard and persistent problem with the RC drilling technique however, particularly in soft clayey saprolite.

"The procedure that was used for splitting the sample at the rig site is summarized below:

- The entire sample is emptied into the required number of clean sample pans (shaped like a loaf tin). Four empty pans are slotted into the "Jones 3-tier" riffle splitter to allow re-collection of all reject sample material plus the two 1/8th splits. The sample is then emptied into the 'funnel-like" arrangement (hopper) on top of the splitter and the material is supposed to cascade through the three splitters. This process produces two 1/8th splits, each of which is placed in a numbered bag with a sample number (SANO) ticket. The remainder of the sample (the 2 + 3) is then re-bagged in the larger plastic bag.

"In practice, the material did not flow freely through the riffles but tended to block the splitter fins and the samplers had to resort to banging the frame of the splitter with a rubber mallet to split the sample. All materials used for the above procedure are cleaned thoroughly between samples.

- The two 1/8th splits are then bagged and sealed (stapled) and placed in sample crates for transport to the camp. The reject sample is also re-bagged (tied with flagging tape) and these have been stored at Passendro village. The two 1/8th splits should have weighed roughly 1.8 kg each, however, there is considerable volume/weight variation caused by variation in initial sample weight as well uneven splitting by the Jones 3-tier splitter. This uneven splitting is of concern and was a problem that was addressed repeatedly throughout the drilling programme. Given the consistency of the saprolite, perhaps a more effective method of reducing initial sample size would be to homogenize and cone and quarter the samples. To produce a more reliable sample split using a Jones splitter would require a larger slot width with a wider riffle, which would prevent the material stacking-up within the riffles. However, given the fine particle size of the material (>90% - 1mm) this is not considered to be of great concern.

- From each sample two tin cans (approximately 850 ml) of material were washed through a 1mm sieve and the –1mm material panned to produce a heavy mineral concentrate to allow an estimate of the number of gold particles to be made. The +1mm material was placed in a chip box for logging though this rarely exceeded 1-2 teaspoons of material. Logging, panning and inspection of the HMC's is carried out at the rig.

4.7.2 Second Stage RC Sample pre-preparation of 1/8th Splits

"During the Phase 1 first pass assaying was carried out mainly on 5 metre composite samples. A limited number of 1 metre samples were assayed (at SGS) and some check assay (FA) and cyanide solution gold test work (at OMAC) was carried out. However, having noted the correlation between high gold particle estimates and significant gold assays during Phase 1, a combination of 1 metre and 5 metre composite samples was used for Phase 2.

The sampling methodology for drill holes was therefore modified. Each drill hole was sampled based on gold particle counts derived from panning samples at the rig. The system of compositing over 5 metre intervals was maintained over intersections without significant VG (less than 10 particles or more.

The sample preparation methodology for the 1/8th splits is described below:

"Of the two 1/8th splits derived from each 1 metre sample, one complete set of 1/8th splits has been stored in a locked 20 foot container at the Ndassima camp. For 5m composite samples the second set of 1/8th splits was subjected to the following procedure. This work was supervised at all times by a CAR geologist and/or technician.

- The samples from each hole are arranged in consecutive order on a tarpaulin.

- For each five consecutive samples (a 5-metre interval) the preparation procedure is as follows:

    - Empty each dry sample on a clean plastic sheet and then homogenize by "tumbling" the sample material across the full width of the sheet by lifting consecutive corners. This is done 16 times.

- Place the sample in one of the splitter tins. Split twice to produce a 3 sub-sample (in other words a 1/32nd of the original sample).

- Re-bag the rejects including the original sample card.

- Place the 1/32nd sub-sample on a plastic sheet, re-homogenise (as above) and collect a 330ml of the sample by randomly spooning material from the sample powder. A constant volume is taken because of the variation in the initial sample volume.

- Bag the 330ml sub-sample and assign a new sample number.

- Carry out the same procedure for the 4 other 1/8th splits in the 5-metre interval. Add the five 330ml sub-samples together, insert the sample number ticket and staple the bag.

- Duplicate samples of the 5-metre composites were inserted in batches during Phase 1 only, usually one per hole (about 8%).

- The 5-metre composites are then packed, and subsequent to CAR government sample inspection in Bangui, are sealed in plastic pails for airfreight to SGS in France (Phase 1) and OMAC in Ireland (Phase 2).

“During Phase 2 sample pre-prep was done using the same procedure as above for the 5 metre composites.

“For the 1 metre samples submitted during Phase 1 and 2, the following procedure was followed:

- Empty each dry sample on to a clean plastic sheet and then homogenize by “tumbling” the sample material across the full width of the sheet by lifting consecutive corners. This is done 16 times.

- Place the sample in one of the splitter tins. Split twice to produce a 3 sub-sample (in other words a 1/32nd of the original sample).

- In the event that insufficient material was available to give a minimum 500g sample, the remainder of the 1/8th split was added and treated in the same way.

- The resulting 3 sub-sample for analysis is bagged retaining the original sample number.

- Re-bag rejects including the original sample card and bag.

4.7.3 Analytical Work on RC Samples

During the Phase I RC drill program, all of the 1/8th 5-metre composite split RC samples were shipped to SGS in France. All samples were subjected to a full sample preparation and analysed for gold only by fire assay (FA). AXMIN requested that SGS dry and homogenize each sample, split 1 kg for milling and take 50 gram aliquot for analysis (Code FA50).

“During Phase 1 a total number of 865 RC samples were sent to SGS in 6 batches. Included within these batches were a total of 78 duplicate samples (each one being a second split from each of the five sub-samples comprising the composite). Also during Phase 1, 44 1-metre splits were sent to OMAC for check assaying (50g fire assay), analysis for CN soluble gold as well as analysis for a 46 element suite by ICP.

“For Phase 2 routine analysis of RC samples was carried out at OMAC laboratories in Ireland. At OMAC the samples were subjected to a full prep (P5 and P7) followed by a 50g FA (Au4) for gold only. A total number of 1801 RC samples, comprising 5-metre composites (Phase 2) and 1-metre splits (from Phase 1 and 2) were sent to OMAC in 5 batches. Some of these samples were also analysed for gold using Screen Fire Assay.

“In addition, 106 samples (from Phase 2 drilling) were selected for check assay, which was carried out by Lakefield Laboratories in Canada.

4.8 DATA CORROBORATION AND QUALITY ASSURANCE – QUALITY CONTROL PROGRAM

4.8.1 Data Corroboration

Due to the nature of coarse gold found in the RC and RAB drill holes (from panning RC and RAB cuttings), it was evident that poor repeatability of fire assay data from both SGS and OMAC labs would occur. In order to determine an appropriate analytical method to use for the coarse gold problem, AXMIN selected a sub-set of 95 samples to carry out both fire assay and screen fire assay at OMAC. The objective of this experiment was to determine whether or not to use screen fire assay as the routine analytical method or continue with the traditional fire assay.

AXMIN provided the initial SGS and OMAC datasets to Resource Service Group (“RSG”) of Australia to conduct a review of both datasets. In comparing the repeat analyses from Phase 1 (SGS) and Phase 2 (OMAC and OMAC versus Lakefield) revealed that all datasets have poor precision, particularly in the value range of 1.5 to 5 ppm Au. AXMIN noted that the OMAC dataset shows better repeatability compared with the SGS dataset, however, the results do confirm the coarse gold problem. RSG also concluded that the fire assay versus the screen fire assay datasets show inadequate precision.

AXMIN has proposed to undertake a detailed statistical study of the data during the next phase of work in order to determine the appropriate analytical method to be used for future drill programs.

4.8.2 AXMIN's Quality Assurance – Quality Control Program

During the Phase 1 RC drill program, AXMIN's quality assurance-quality control program ("QA-QC") consisted of placing one "duplicate" sample per hole (approximately 11%). (Note: this duplicate was a second 5 metre composite sample). This practice was not continued by AXMIN during the Phase 2.

During the Phase 2 drill program, AXMIN introduced standard materials and silica sand blanks which were provided by Geostats Pty Ltd. in 50 g sachets. These standards were inserted in all batches of RC drill samples to monitor laboratory accuracy.

4.8.3 Independent Sampling Results by A.C.A. Howe International Limited

4.8.3.1 Phase 1 and 2 Reverse Circulation Re-sampling by Howe

During Howe's April 2001 site visit, Howe collected five one metre interval RC drill hole samples from Asquith - AXMIN's sample storage facility which contained anomalous gold values from the Phase 1 and 2 RC drill program completed on the Passendro – Main Zone and French Camp Target Areas. Howe conducted the following sample review for its independent sampling program:

- Located and identified sample numbers (intervals) of interest to be re-assayed;
- Each sample bag was verified for any possible tampering, (holes, any evidence of bag being re-opened, etc.);
- Each collected sample was then re-tagged with a Howe sample number;
- All of the samples were placed in a sealed plastic bucket for shipment to an independent Canadian analytical lab. The independent lab will duplicate the sample prep and analysis procedures as used by OMAC Laboratories of Ireland.

Table 4-13 Summary of Howe Re-Sampling of 2000 RC Drill Program

Howe Sample Number	AXMIN Sample Number	RC Drill Hole	Grid Area	AXMIN Result 1 (g/t Au)	AXMIN Result (g/t Au)	Howe Result (g/t Au) FA50	Howe Result (g/t Au) gravimetric
104805	13922	PRC 157	Passendro	1.08	-----	0.84	-----
104806	13927	PRC 157	Passendro	14.56	9.98	6.12	6.14
104807	15132	PRC 087	Passendro	1.38	-----	0.186	1.28
104808	15177	PRC 088	Passendro	1.66	2.25	0.545	0.60
104809	18105	PRC 145	French Camp	0.77	0.67	0.502	-----

Based on the analytical results obtained by AXMIN, subsequent preliminary statistical work completed by RSG and Howe's results, it is evident that sample reproducibility cannot be duplicated either by fire assay or gravimetric assay. However, Howe's samples do reflect the "nugget effect" that is existent in the saprolitised units. The nugget effect may be a product of any of the following factors:

- Sample size differentiation due to RC drill cuttings recovery that may produce an overvaluation of the assay result and /or;

- Chemical weathering processes forming supergene enriched zones within saprolitic horizon, leading to the re-precipitation and non-uniform distribution of coarse Au.

In order to "quantify" the nugget effect, further statistical studies (e.g. variograms) should be carried out as well as the twinning of auriferous intersections with large diameter (NQ or HQ) core drilling.

4.8.3.2 Topa Iron Deposit

Howe collected four grab samples from in-situ iron formation outcrops from the Topa iron deposit. All of Howe's sample locations were collected from areas originally sampled by AXMIN and their positions obtained by GPS. Table 4-14 summarizes Howe sample numbers, locations and results.

Table 4-14 Summary of Howe Sampling from the Topa Iron Discovery

AXMIN Sample Number	Howe Sample Number	Sample Area	Major Mining Co. Result (Fe%)	Howe Result (Fe%)
17865	104801	Topa Cliff	69.2	67.5
17870	104802	Topa Pinnacle	65.6	65.4
17876	104803	Boulder Field	67.4	68.0
-	104804	Topa Hill Mass Area	-	65.4

It is evident that Howe's XRF results conform to the major mining company's values.

4.9 INTERPRETATIONS, CONCLUSION AND RECOMMENDATIONS

4.9.1 Interpretations

Base on the results obtained from the RC drilling program completed on the Passendro Main Zone Target Area, AXMIN has noted that the gold mineralisation is in part associated with a zone of quartz-tourmaline veinlets and is interpreted as a series of parallel/subparallel structural zones typical of Archean shear hosted gold deposits. Howe suggests, based on a paucity of quartz vein material found on the surface (as float or quartz clasts in duricrust), that there is a possible "syngenetic" gold component within the steeply dipping metasedimentary units below the saprolite (see Hole PRC109 description in Section 4.5.1.2). This could possibly explain the repetitive appearance of gold bearing units (with or without quartz and/or quartz-tourmaline veining) intersected in the saprolite and sulphide zones observed on the drill fences.

Howe suggests that a combination of both models (stratiform and shear hosted gold) may be responsible for the distribution of gold below the saprolite horizon (weathering front) at the Passendro Main Zone Target Area.

Farrington (2000) in the re-interpretation of the airborne geophysical surveys, suggests that the property is underlain by a large granitic body, which, may be the source of the boron introduced into the Main Zone. Boron-bearing fluids may have preferentially impregnated porous volcaniclastic/metasedimentary schist units which may explain the inferred stratiform and/or stratabound nature of the gold mineralisation outlined to date in the saprolitic units by RC and RAB drilling.

4.9.2 General Comments and Recommendations by Howe

Based on its review of the available date Howe makes the following general comments and recommendations.

4.9.2.1 Soil Surveys

- Although AXMIN has carried out reconnaissance and detailed conventional soil surveys, none of the samples collected have been analysed for arsenic (As). Arsenic is generally immobile in chemically weathered terrains and as such, is a useful pathfinder element for locating primary gold deposits. The analysis for arsenic over soil grid areas covering interpreted folded BIF units is recommended in order to determine the presence of potential non-stratiform BIF-hosted gold deposits (see Table 3-1);

- Howe suggests that AXMIN should consider carrying-out a Mobile Metal Ion Geochemistry ("MMI") orientation soil survey over Au in soil anomalies outlined by conventional methods, particularly in areas where duricrust is present. MMI has been used with some success as an exploration tool in tropically weathered terrains. It is suggested that several orientation lines over known gold anomalies and mineralized zones be carried-out in order to determine whether MMI is an effective exploration tool in characterising surface gold anomalies.

4.9.2.2 Gold Assays and dealing with "Nugget Effect"

Based on the analytical results obtained by AXMIN, subsequent preliminary statistical work completed by RSG and Howe's own analysis of the results, it is evident that sample reproducibility cannot be duplicated either by fire assay or gravimetric assay. However, Howe's samples do reflect the "nugget effect" that is existent in the saprolitised units. The nugget effect may be a product of any of the following factors:

- Coarse gold particles in saprolite material;

- Differing initial RC sample size due to varying recovery of 1 metre RC samples that may produce an over-valuation or under-valuation of the assay result and /or;

- Chemical weathering processes forming supergene enriched zones within saprolitic horizon, leading to the re-precipitation and non-uniform distribution of Au.

In order to "quantify" the nugget effect, further statistical studies (e.g. variograms) should be carried-out as well as the twinning of auriferous intersections with NQ or HQ core drill holes.

4.9.2.3 Resource definition and calculation

All resource and reserve estimations that are to be made public must conform to National Instrument 43-101 and C.I.M.M. guidelines.

- Future resource calculations must take into account the geological domain(s) to which the gold mineralized intervals, that AXMIN have calculated, belong to;

- Since RC and / or RAB drilling has been the only method used to test the gold potential at depth, it is recommended that a minimum 10% of the holes or metreage be tested by core drilling as required by National Instrument 43-101;

4.9.2.4 Trenching

- If AXMIN is able to gain access to mechanical equipment, Howe recommends that trenches are excavated (where possible) across newly obtained soil anomalies in order to map the regolith and other geological features, and to delineate and define widths of gold mineralized saprolite (± quartz veining) and/or structures. Historically, trenching has met with limited success because of the duricrust.

4.9.3 Conclusions

The following conclusions are based on available reports from Asquith, a site visit to the property and the results of the AXMIN/Asquith Joint Venture's exploration program:

1) The Property is underlain by the Archean age Bandas Greenstone Belt which is known to host numerous alluvial gold occurrences which were exploited in the past and are currently being worked by local artisans / orpailleurs;

2) Regional and detailed soil surveys were carried out over seven areas by Asquith (Passendro grids) and AXMIN (Ndassima, Ndassima Extension, Ao, N1, N2 and Louba grid areas) totalling 264 km^2 in coverage. Asquith's Passendro grid survey consisted of conventional soil sampling and termitaria geochemical surveys, while AXMIN's surveys were conventional soil surveys;

3) A 5,500 m by 400 m 50 ppb Au termitaria soil anomaly occurs on the Passendro grid. The anomaly trends 320°;

4) Twelve trenches totalling 382.0 metres were excavated on the Passendro Grid by Asquith. Of the 12 trenches, Trench TR-98-36N returned one mineralised zone with an average grade of 1.1 g/t Au over 23 metres;

5) Asquith completed a 60 hole RAB drilling program over the Passendro grid area whereby four holes returned averages of 1 g/t Au or greater over a minimum width of 8 metres.

6) A two phase drilling program (144 RC holes and 14 RAB holes) totalling 7,462 metres was completed on the Passendro (139 holes) and French Camp (19 holes) grid areas by AXMIN in 1999 - 2000. A total of 71 holes returned gold mineralized intervals > 1.0 g/t Au in saprolitic material;

7) AXMIN carried out an in-house preliminary resource calculation of the mineralized saprolitic material obtained from the reverse circulation drilling programs on the Passendro and French Camp Target Areas. Although this resource calculation does not conform to the C.I.M.M. and NI-43-101 guidelines, the Passendro Main Zone has a

preliminary inferred resource of 1,656,240 tonnes grading 3.20 g/t Au (or 170,707 ounces Au) and the French Camp has a preliminary inferred resource of 563,000 tonnes grading 3.22 g/t Au (or 58,281 ounces Au). This resource calculation was completed by AXMIN to ascertain the gold potential of the target areas as well as to help in the delineation of additional gold resources that would conform to the guidelines. Howe has neither audited nor verified this resource statement;

8) In 2000, AXMIN identified the Topa iron ore discovery which consists of at least two sub-parallel E to ESE trending iron-rich units approximately 300 to 400 metres wide and up to 2,000 metres in length. Average Fe% values range from 66.7% Fe from lithium metaborate fusion analyses to 67.9% Fe from XRF assays completed by a major mining company.

4.9.4 Recommendations and Proposed Work Program(s)

On the basis of Asquith and AXMIN's results from the exploration work to date on the Property, it is Howe's opinion that the Roandji Gold Property appears to be an attractive project that warrants additional work. In this regard, AXMIN has recommended a staged Phase I program of geological mapping and follow-up reconnaissance and detailed rotary air blast and/or reverse circulation drilling over new targets that have been delineated within the Passendro Main Zone and French Camp areas as well as on the Ndassima and Ao grid areas.

AXMIN's Phase I RC drilling program for the Passendro Main Zone will comprise drill fences along strike to the NW and SE of the Main Zone, as well as several deep RC holes within the Main Zone to test for hypogene gold mineralisation.

Additional RAB drilling at the French Camp area is recommended in order to delineate additional gold mineralization along strike of the known inferred gold mineralized zones. Follow-up RC drilling has been proposed to test several detailed soil sample anomalies obtained by AXMIN in 2000.

AXMIN has proposed to conduct a geological mapping and a RAB drill program to follow-up Au soil anomalies obtained on the French Camp Extension Grid, Ndassima Grid and Ao Grid areas. AXMIN has also proposed to conduct a follow-up detail soil survey and geological mapping program over the Louba Grid anomaly in order to delineate additional RAB targets.

AXMIN plans to carry-out only limited additional work on the Topa Iron Ore discovery as they would like to joint venture the target area. This work will comprise more detailed geological mapping, trenching, and sampling for initial metallurgical testing. Howe recommends that a minimum four hole diamond drill program be carried out on the Topa Iron Ore discovery in order to indicate the depth potential of the iron mineralization.

Assuming positive results from the RAB and RC drilling, the next phase of exploration is to take four to six months to complete at a cost of $1,082,000 (including holding costs for fees and local administration for the 18 months to the end of 2002).

Details of the 18 month budget are as follows:

		Canadian $
Fixed Holding Costs		
Licence Fees	$ 16,000	
Local Administration Costs	$ 141,000	**$ 157,000**
RAB/RC Drilling and Support Costs		
4000m RAB drilling (@45/m)	$ 180,000	
1000m RC drilling (@ $62/m)	$ 62,000	
Assays (1200 @ $38)	$ 46,000	**$ 288,000**
Core Drilling and Support Costs		
2000m drilling (@165/m)	$ 330,000	
Assays (1000 @ $38)	$ 38,000	**$ 368,000**
Salaries and Travel Costs		
6 months @ 23,000/mo.	$ 138,000	
12 months @ $2,667/mo	$ 32,000	**$ 170,000**
SUBTOTAL		**$ 983,000**
CONTINGENCY		**$ 99,000**
TOTAL		**$ 1,082,000**

5.0 TANZANIA

The Siga Hills gold project of AXMIN is located in northern Tanzania in the Archean, Lake Victoria Greenstone Belt. There has been significant exploration success in the area during the 1990's and three gold mines have been discovered and brought into production; Golden Pride mine (Resource Limited, total resource 2 million ounces gold, 2000 production 225,000 ounces at a cash cost of US$156 per ounce); Geita mine (Ashanti Goldfields, total resource 14.6 million ounces gold, 2000 production 500,000 ounces at a cash cost of US$145 per ounce); and Bulyanhulu mine (Barrick, total resource 10 million ounces, 2001 production target 400,000 ounces at a cash cost of US$130 per ounce). The foregoing resource information is from the corporate websites of Resource Limited, Ashanti Goldfields, and Barrick.

The Siga Hills project is 15 km east of the Bulyanhulu mine site and the undeveloped Golden Ridge deposit (Barrick, 1.5 million ounce resource) is 10 km to the southeast.

5.1 GEOLOGICAL SETTING

5.1.1 Regional Geology of Tanzania

Tanzania is underlain by the East African Craton. The craton is comprised of an Archean granitic gneiss basement complex and the Lake Victoria greenstone belt. Barrick (2000) in their annual report has noted that the Lake Victoria greenstone belt has many similarities to the Abitibi greenstone belt of Canada.

The Great Rift Valley of Africa crosses central Tanzania in a northeasterly direction. Many kimberlite pipes (including the Williamson mine's Mwadui pipe) of Cretaceous age are spatially related to the rift zone. Tertiary to recent basaltic flows occur in northeastern Tanzania as a result of rift related volcanism.

Figure 5-1 illustrates the regional geological setting and the location of the major gold occurrences in the area. Table 5-1 presents a Table of Formations for the area.

5.1.2 Geology of the Siga Hills Project Area (Figure 5-2)

The Siga Hills area is underlain by north to north-northwest to northwest striking, steeply dipping, isoclinally folded volcanic and sedimentary rocks of the Lake Victoria greenstone belt.

The northeast half of the property is underlain by banded iron formations made up of millimetre scale beds of hematite, magnetite, and chert. The southwest half is underlain by felsic volcanic and volcaniclastic rocks (tuffs and tuff-breccias). Stratigraphic tops are to the west on the property. The contact between the two lithologies is transitional from cherty iron formation to cherty tuff.

Table 5.1
Table of Formations
Tanzania

PHANEROZOIC

POST PROTEROZOIC TO CENOZOIC
Residual soils, hardpan, sand
Cenozoic Basalts related to the Rift Valley
Kimberlite Pipes (including Williamson mine)
UNCONFORMITY

PRECAMBRIAN

LATE DYKES
Diorite-Gabbro
INTRUSIVE CONTACT

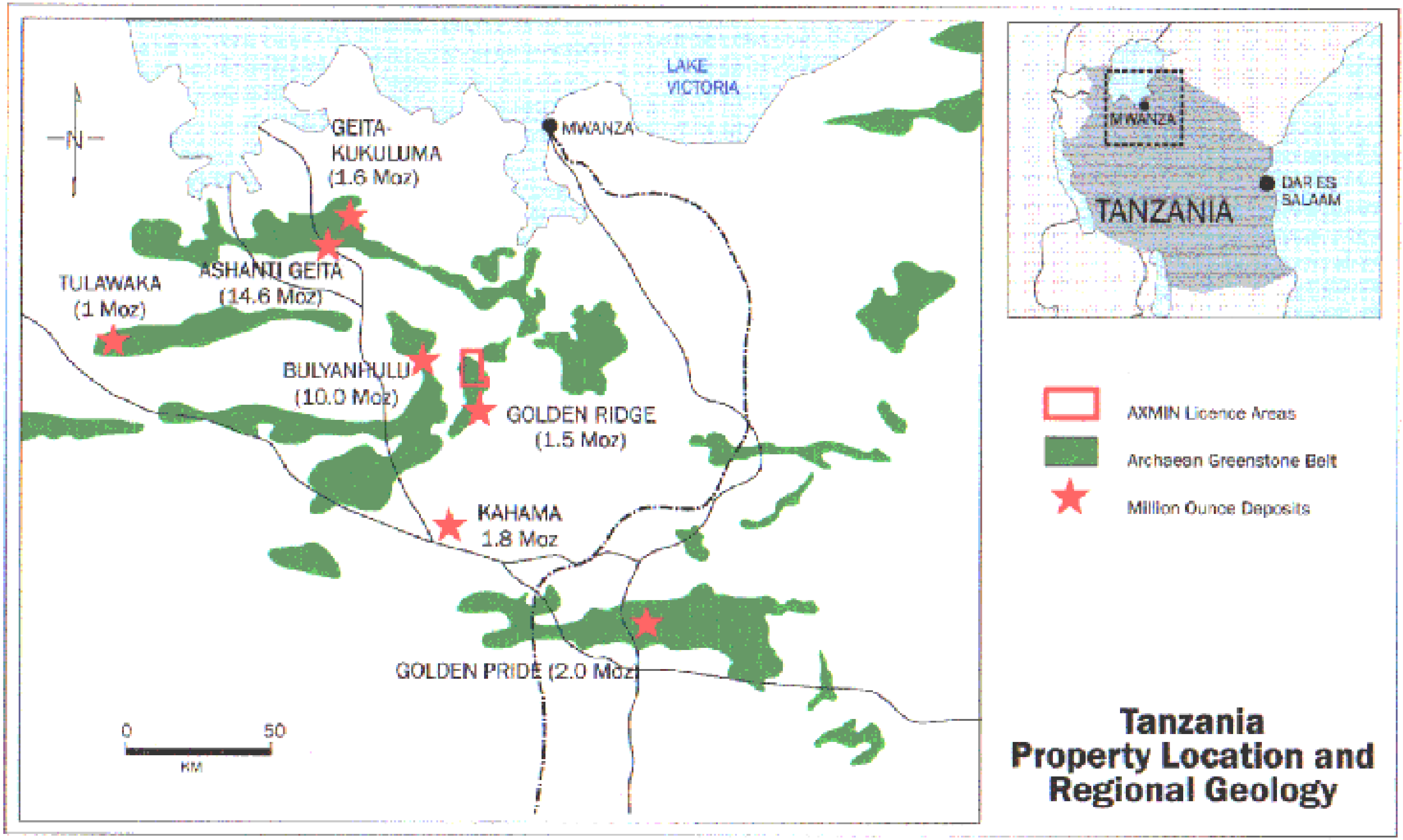
POSTTECTONIC FELSIC INTRUSIVES
Granite-granodiorite batholiths
INTRUSIVE CONTACT

SYNTECTONIC FELSIC TO INTERMEDIATE INTRUSIVES
Foliated, elongate granodiorite-diorite batholiths
INTRUSIVE CONTACT

ARCHEAN (East African Craton)

LAKE VICTORIA GREENSTONE BELT

Granitic Gneiss and Migmatite



Tanzania
Property Location and Regional Geology

A.C.A. HOWE INTERNATIONAL LIMITED

FIGURE 5-1

The BIF ridges, and separating valleys respectively, are formed by symmetrical and asymmetrical F1 folds. The major, north-northwest trending F1 fold axes are paralleled by second-order parasitic folds on the limbs of the former. Generally these parasitic folds can be observed as narrow isoclines of tuff, surrounded by chert, tuff/chert or BIF.

The sub horizontal fold axes locally plunge at moderate angles and this is especially the case at the ends of the whaleback ridges. However, this set of F1 fold axes can be clearly distinguished from a set of sub vertical fold axes (F2), which has deformed the F1 folds into curvilinear fold axes and thus postdates them. The F2 folds are vertically to steeply plunging concentric folds, kink zones, S- and Z- structures.

5.2 DEPOSIT TYPE MODELS FOR TANZANIA

5.2.1 Introduction

The area is underlain by an Archean greenstone belt that is similar in many aspects to other Archean greenstone belts in the world. The recent gold discoveries have been made by companies experienced in gold exploration in the Archean.

The common denominator in all known gold occurrences of significance found in Archean greenstone belts worldwide is that the majority occur in structurally controlled settings where brittle fracture has created zones that allowed extensive circulation of hydrothermal fluids. Major regional structural features (faulting, folding, and intrusive related deformation) provide a focal point for selecting broad scale areas for exploration.

A review of relevant gold and iron deposit types is presented in Section 3.0.

5.3 SIGA HILLS PROPERTY

5.3.1 History of Siga Hills and Surrounding Area

The Siga Hills area was the object of a joint exploration project by the Tanzanian (Madini) and West German (BGR) geological surveys during the period 1988-1992. This project involved a helicopter-borne geophysical survey involving radiometric, magnetic and electromagnetic methods. Flight line spacing was 250 metres. Ground work involved regional stream sediment geochemical (BLEG (bulk leach extractable gold)) and lithogeochemical survey with geological mapping. These surveys generated 12 target areas that were subjected to more detailed ground geophysical, geochemical and geological survey, including trenching.

Four target areas were identified within the Siga Hills project area at ^{04}60300E,^{96}40100N (Ibalangulu North Gossan), ^{04}60650E, ^{96}39800N (Ibalangulu South Gossan), ^{04}61850E, ^{96}37500N (Nyamigamba Gossan), ^{04}62300E, ^{96}36050N (Nyamigamba Quartz Vein). The former three target areas were soil sampled on 50 metre x 25 metre grids. The work was undertaken between 22nd January to September 1996 and totals of 264 soil, 43 rock and 26 stream sediment samples were collected.

In reviewing this data AXMIN's geologists noted disparities between the size and orientation of the grids as shown on the individual target area maps and as plotted on the 1:50,000 scale topographic map of the licence. The conclusion was also reached that the gold anomalies follow a north-south trend yet the maps of the soil sampling grids show the trend as WNW-ESE (according to the north arrows shown on the plots). If the sampling grids are orientated according to the shape of the blocks as shown on the 1:50,000 PL map, then the trend is NW-SE. Other errors and omissions concerning sample numbering and position were found throughout the report.

5.3.2 Exploration Work by AXMIN (1999-2001)

AXMIN initiated work in the project area in December 1999 and completed the initial program in June 2000. Gold in soil geochemical surveys were completed followed by a program of trenching on the most significant gold anomaly. In March 2001 AXMIN completed 10 RC holes totalling 861 metres.

Soil Geochemical Survey

During the period December 1999 to June 2000 a first-pass, 400 x 100m gold in soil geochemical survey was completed with a total of 2,292 samples taken. The initial geochemical coverage identified two anomalous areas (Figure 5-2), one in the northwest part of the property and the other, on trend in the southeast sector. In addition a number of isolated anomalous values were obtained.

Follow-up sampling was completed in selected areas on either a 200 x 100m grid where strike trend was known or 100 x 100m where strike trend was uncertain. A total of 1,336 samples were taken during the follow-up program. The follow-up results confirmed two target areas in the northwest (Figure 5-3) and southeast (Figure 5-4) sectors of the property.

Howe would point out that the experienced AXMIN technical staff recognised in early January 2000 that samples taken during December 1999 and analysed by SGS Laboratory, Mwanza, appeared to indicate a higher than normal back ground level compared to elsewhere in the Lake Victoria greenstone belt. They concluded that the background samples were contaminated and furthermore, it appeared that one batch of 128 samples was severely contaminated. Subsequent investigations suggested that the samples were contaminated at the preparation stage, a distinct possibility as the SGS laboratory deals with ore grade samples from the Bulyanhulu deposit running at 10-15 g/t Au. Analysis of the pulverised –1mm +80# fraction of the sample rejects showed good correlation with the verified results from anomalous samples in the three other batches, so this size fraction was processed and analysed and, as the results appeared credible, incorporated in the first-pass sampling results for the licence. Follow-up sampling, proved that most of the anomalies generated by the initial SGS results must have been due to contamination.

Samples taken in February 2000 and thereafter were submitted to Humac Laboratories (affiliated with OMAC of Ireland), Mwanza, for analysis. Laboratory analytical procedure consisted of drying and sieving to –80#, followed by Aqua Regia digestion of a 50 gram (SGS) or 25 gram (Humac) charge with AAS finish. Detection limit was 2 ppb (SGS) or 3ppb Au (Humac).

Trenching

Four shallow (<1 to 2m deep) trenches (Figure 5-5) were excavated across the anomaly at intervals of between 300 and 900 metres over a total strike length of 2km and totaling some 1000 metres of trenching. The trenches were sampled along the base, relative to geology, and at no more than 5 metre intervals, with a mean sample weight of 3kg. The trench geology has been logged in detail.

Trench 1 returned an average of 400 ppb gold over 46m, including 4.5m grading 2.2 grams gold per tonne. Trench 3 returned an average of 1100 ppb (1.1 grams per tonne) over 30m including 3.1 grams gold per tonne over 10m. The anomalous areas in Trenches 1 and 3 are associated with zones of increased deformation close to the contact between the transitional chert unit and the underlying banded iron formation.

All four trenches are in weathered in-situ rock and there may have been extensive leaching of gold at surface within this environment.

Drilling

During March 2001 AXMIN completed a 10 hole reverse circulation drilling program totalling 861 metres. Concurrent with the drilling, detailed geological mapping was completed along the west flank of the anomalous zone. The drill hole locations are shown in Figure 5-5.

The results are discussed in Section 5.3.3.2.

5.3.3 Mineralisation and Exploration Targets

5.3.3.1 Overview

The geological setting along the west flank of the geochemically anomalous trend from the northwest through to the southeast part of the property is, according to AXMIN's geologists, similar to the stratigraphic sequence in the vicinity of the Bulyanhulu deposit.

The proximity of the Siga Hills project to the Bulyanhulu mine site provides the possibility that even a modest discovery at Siga Hills could be mined and shipped to the Bulyanhulu site for processing.

5.3.3.2 Northwest Anomaly

The anomalous samples in this area form a pronounced 2.5 km long anomaly on the western side of a 3 kilometre-long NW-SE trending ridge. The axis of this anomaly corresponds with the crest of the ridge, with the gradual falling-off in the gold values to the west corresponding with a moderate slope down to a wide laterite pediment.

The crest of the ridge is narrow, being less than ten metres wide, slightly arched and shows no sign of a remnant lateritised peneplanation surface, which is commonly the case with the hills in the licence. Outcrops of BIF on the ridge strike around 145° - 325° with dips steep to the east. The BIF is in the magnetite/hematite/chert and magnetite/hematite/tuff facies of the transition zone. Most are finely banded or laminated with the magnetite/hematite altered to limonite, the chert to saccharoidal quartz, and the tuff bands highly silicified. Brecciation and veining with quartz and limonite are common.

Mapping and RC drilling at Kayenze during March 2001 resulted in the discovery of a mineralised shear zone parallel to, and with similar strike length to the 2.5km long zone of surface gold mineralisation previously delineated by soil trenches and restricted trenching.

The shear zone is evidenced at surface by intense brecciation in footwall cherts, and a number of ‘exotic’ rock types as float along the shear zone, including silicified intermediate volcanics with boxwork after pyrite and anomalous gold values up to 160 ppb in grab samples. Four RC drill holes have intersected intermediate-mafic volcanics within part of this shear zone. Several of these intersections are intensely pyritised, with up to 15% pyrite in RC chips over the basal 15m intersection (86-101m) in hole number SHRC-2, with an average gold value of 0.31g/t.

It is noteworthy that this stratigraphy and mineralisation are similar to Bulyanhulu hanging wall formations. Other values intersected in the shear zone include 10m at 0.50 g/t and 10m at 0.59 g/t from the same hole, and 5m at 1.3 g/t. In addition, an increasing trend of anomalous gold in SHRC-2 provides tantalising evidence of the possibility of significant gold mineralisation within the shear zone system.

AXMIN does not consider that this newly discovered shear zone and its possible NW extension have been tested adequately. Given the presence of Bulyanhulu-type stratigraphy, sulphide (pyrite ± arsenopyrite) mineralisation and weak gold mineralisation, clear evidence of shearing at surface and an extensive (1000m) untested soil anomaly, AXMIN proposes to carry out further work.

5.3.3.3 Southeast Anomaly

The recon scale anomaly sits in the re-entrant formed by the long eastern and northern boundaries of the licence. The maximum value of 120ppb Au occurs at $^{4}65100$, $^{96}31600$ apparently associated with a NNW-trending fault. Adjacent high values of 78, 39, 38 and 30ppb Au are found on the same traverse line. The next traverse line south has 10 samples with values of between 12 and 22ppb Au; which are possibly related to a W20°N fault.

Follow-up sampling on a 100 metre x 100 metre grid produced highs of 88, 82 and 70ppb Au with 21 other samples ranging between 12 and 66ppb Au. These 24 samples form a distinctly anomalous NW-SE trending zone, 700 metres long by 400 metres wide, not related to any interpreted faulting. They, however, occur on a steep slope and the extent of the anomaly may in part be due to downhill soil creep.

This zone would only warrant follow-up in the event that significant mineralisation was encountered elsewhere on the property.

5.4 SAMPLING METHODS AND APPROACH

See Sections 4.7 and 6.5

5.5 SAMPLE PREPARATION AND SECURITY

See Sections 4.8 and 6.6

5.6 DATA CORROBORATION

See Sections 4.8 and 6.7

5.7 INTERPRETATIONS, CONCLUSIONS, AND RECOMMENDATIONS

5.7.1. Regional Geological Setting

The regional geological setting is a typical Archean greenstone belt environment with potential for world-class gold deposits. The exploration successes in Tanzania in the 1990's provide persuasive evidence of this potential.

Mapping and RC drilling on the Norwest Anomaly area resulted in the discovery of a shear zone containing up to 15% pyrite. The zone is parallel to and west of the main gold geochemical anomaly trend. The geological setting is similar to the hanging wall formations at the Bulyanhulu mine located 15 km to the west.

Howe concurs with AXMIM's conclusion that the newly discovered shear zone and its possible northwest extension has not been adequately tested and warrants further exploration work during 2001.

5.7.2 Conclusions

Howe concludes that the work programs completed by AXMIN have been completed in a professional manner by competent personnel.

Howe concurs with the conclusions and recommendations of the AXMIN personnel with regard to the next phase of work on the property and is of the opinion that it is warranted.

5.7.3 Recommendations

The work program recommended for the shear zone prospect is as follows:

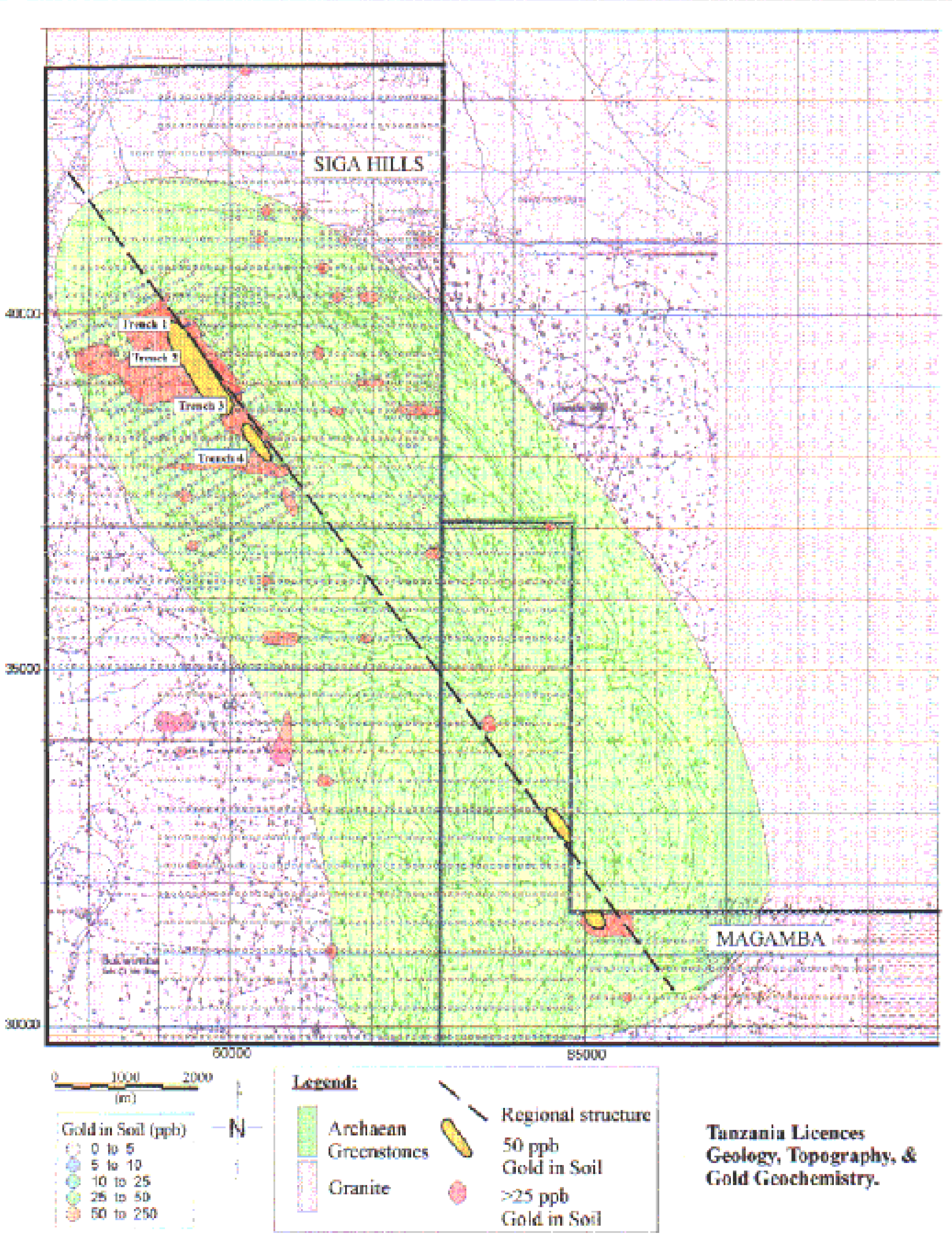
- Ground Geophysics: using a combination of dipole-dipole IP and magnetometer to delineate the extent of sulphide mineralisation in the shear zone.

- RAB drilling program: shallow angled RAB holes (30m or to blade refusal) to test the geophysical and geochemical anomaly. Six RAB fences (comprising 30m spread at 20m along lines at 400m intervals) for a total of 70 RAB holes (1500 metres).

- RC drilling: additional RC drilling will be results driven, based on the RAB program. 600 metres of RC drilling are budgeted for four, 150-metre holes to test the shear zone at depth.

The budget for a 2 month follow-up program is estimated as follows:

Ground magnetometer/IP Survey $ 1000 / km * 12 km (AXMIN to cut grid) Expat supervision and interpretation	Canadian $ 12,000
RAB drilling (1200m $ 25/m) (mobilisation free)	30,000
RC drilling (500m $ 55/m) (mobilisation free)	27,500
Analytical work (500 samples) prep + Au by AAS	6,500
Geological supervision (1 expat, 1 local geo)	16,000
Labour (450 man days)	3,000
Consumables (fuel, food, bags etc.)	6,000
Vehicle rental (two 4 x 4 vehicles for 2 months)	11,000
Total	**$ 112,000**



Tanzania Licences Geology, Topography, & Gold Geochemistry.

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FIGURE 5-2

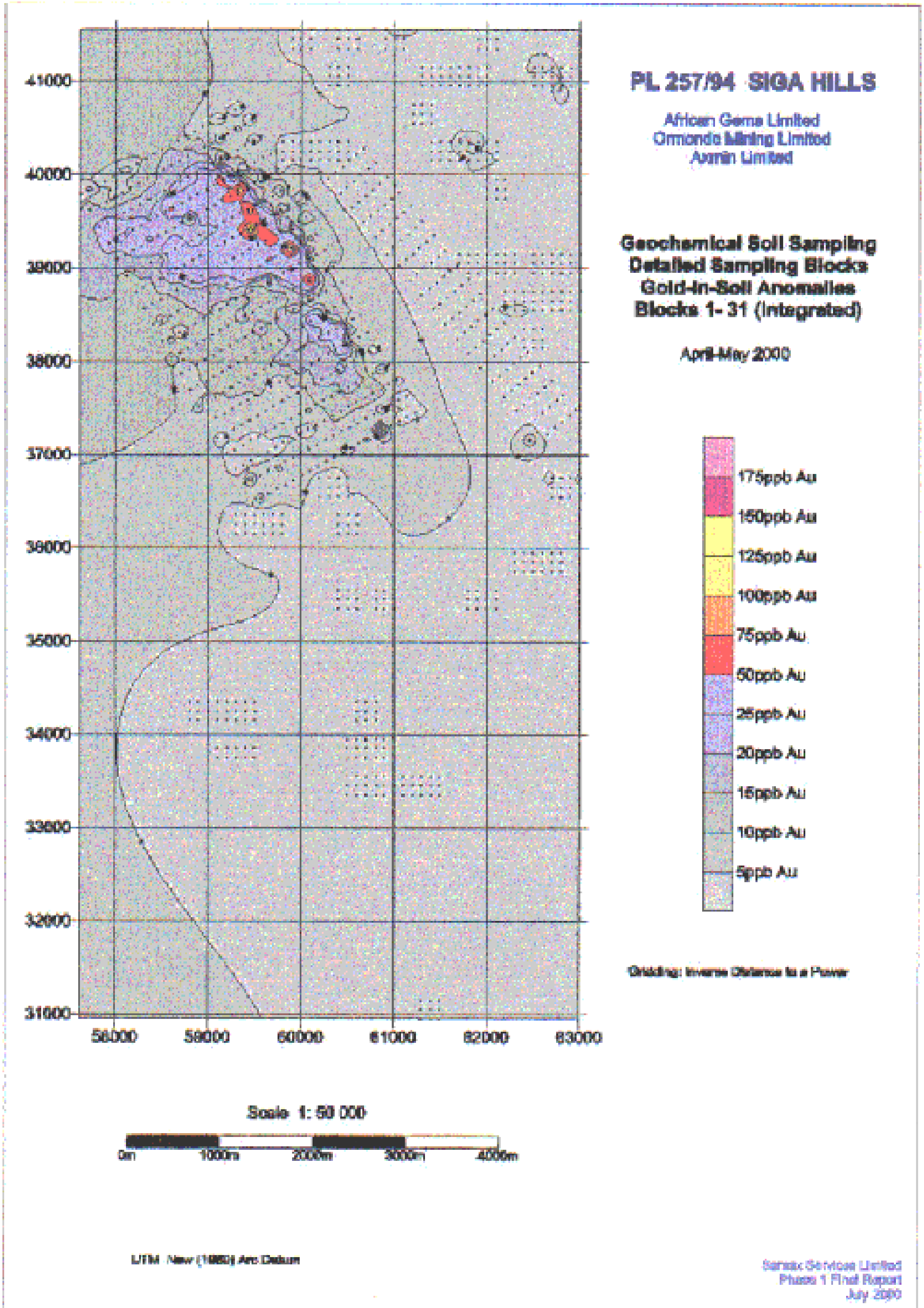

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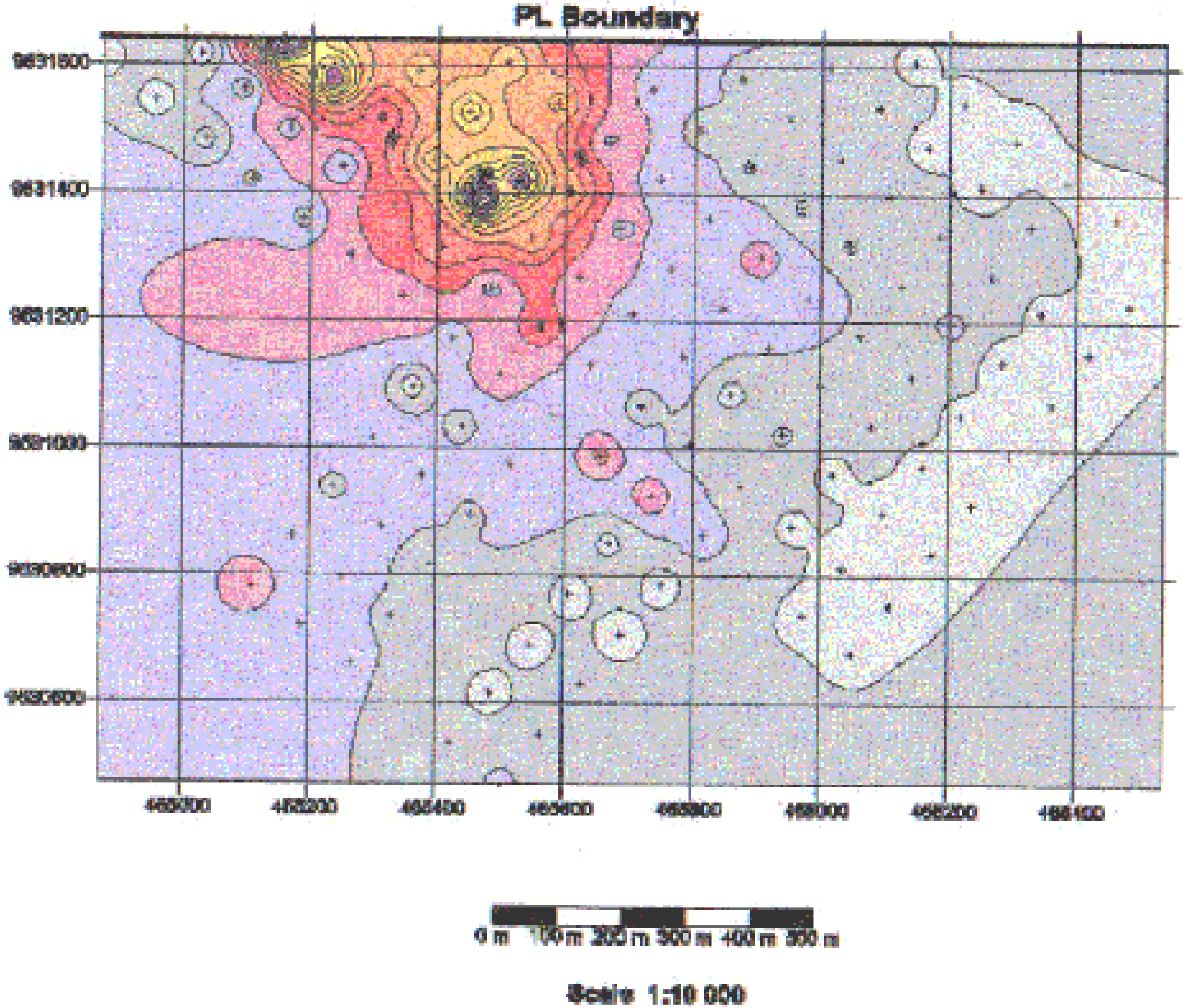
FIGURE 5-3

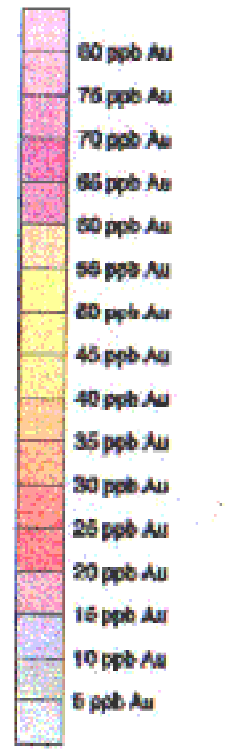
PL 974/98 MAGAMBA

E-B Hance Company
Ormonde Mining Limited
Axmin Limited

Geochemical Soil Sampling
Detailed Sampling Grid
Block 1
Gold-In-Soil Anomalies
May-June 2000



Gridding: Inverse Distance to a Power



UTM New (1960) Arc Datum

Samax Services Limited
Phase 1 Final Report
July 2000

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FIGURE 5-4

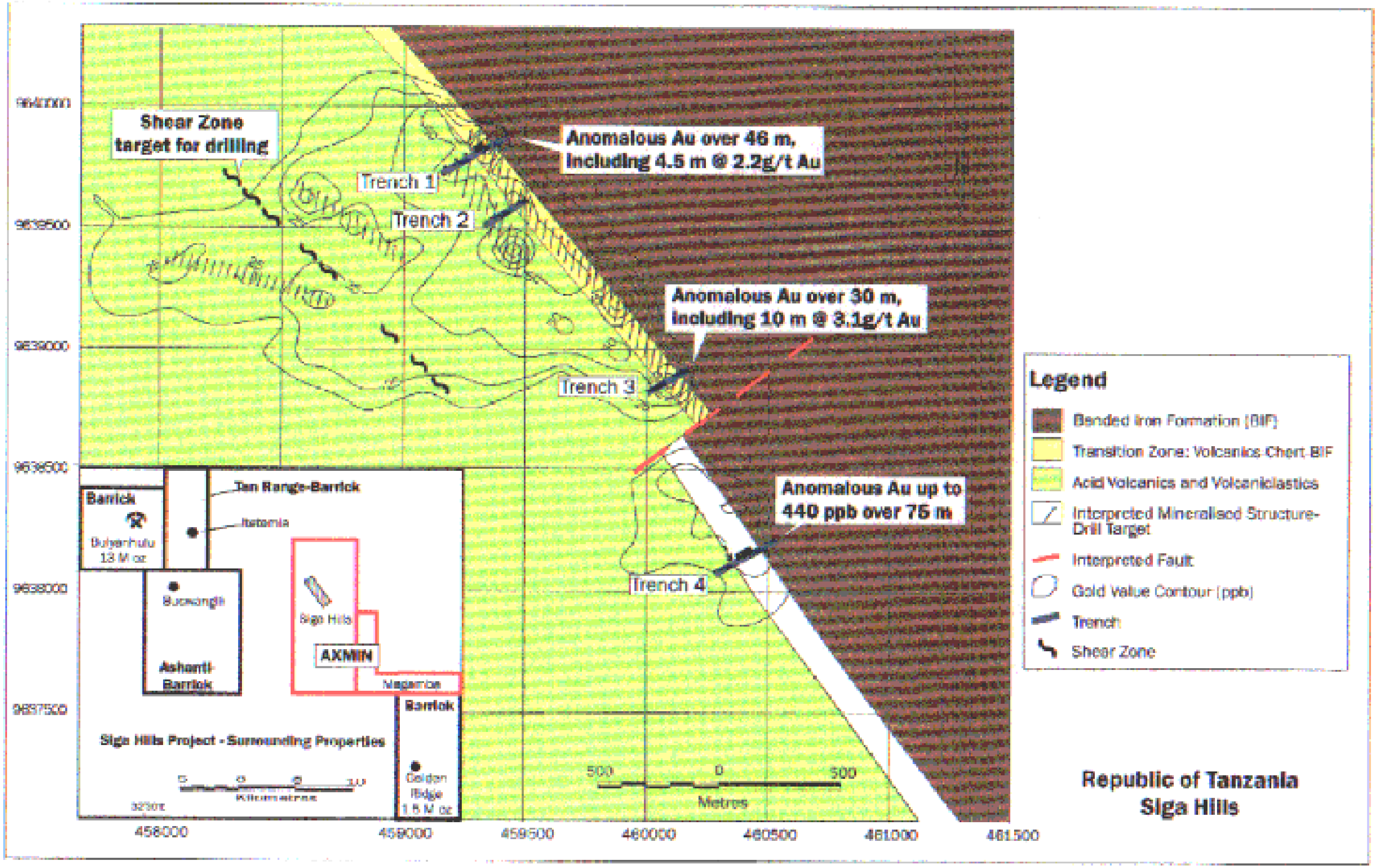

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FIGURE 5-5

6.0 MALI

The Mali gold projects of AXMIN are located in western Mali in the same geological trend and environment as the Birimian-type, world class Sadiola mine (Anglogold/IAMGold, resource 106 million tonnes grading 2.4 grams gold/tonne, 2000 production 611,442 at a total cash operating cost of US$123/ounce), the Yatela mine (Anglogold/IAMGold, resource 13 million tonnes grading 3.7 grams gold/tonne), and other significant gold deposits such as Loulo (Randgold, resource 31 million tonnes grading 3.7 grams gold/tonne) and Segala (Semafo, main zone resource, 9 million tonnes, 3.2 grams gold/tonne).

AXMIN currently has two project areas in Mali (Figure 6-1). The Kofi project area is the primary project and comprises the contiguous Kofi, Netekoto, Metadia, and Yatia South Licences, covering approximately 260 km^2. The Segala deposit is located just outside the southeast corner of the Kofi project area and the Loulo and other occurrences discovered by Randgold are on the property immediately to the southwest and on structural trend with the west part of the Kofi project area.

The Satifara project area is comprised of one licence and covers approximately 42.9 km^2. Satifara is an early stage exploration project, following up on soil geochemical anomalies from historic work in the area.

Mali is now the third largest gold producing country (965,000 oz. per year) in Africa behind South Africa (14,300,000 oz. per year) and Ghana (2,600,000 oz. per year).

6.1 GEOLOGICAL SETTING

Mali is located in the West-African Craton which comprises Archean and Lower Proterozoic terranes (stabilized 1.5 to 1.6 Ga ago). The West Africa Craton underlies much of Ghana, Burkina Faso, Ivory Coast, Liberia, Sierra Leone, and parts of Guinea, Senegal and Mali. These terranes are partially covered by undeformed, Upper Proterozoic to recent formations.

The West African craton outcrops in western Mali along the Mali-Senegal border in the area known as the Kédougou-Kéniéba Inlier. A smaller inlier known as the Kayes inlier occurs approximately 30 kilometres to the north of the Kédougou-Kéniéba Inlier.

The sandstones of the Taoudeni basin (Upper Proterozoic to Carboniferous) cover the remainder of Western Mali. In northeastern Mali the rocks of the Taoudeni basin are covered with Mesozoic and Cenozoic intracontinental formations.

The Kofi and Satifara projects are located within the Kédougou-Kéniéba Inlier an area underlain by supracrustal and plutonic rocks of the Lower Proterozoic.

6.1.1 Regional Geology (See Figure 6.1)

The Mali West Project mapping program (KLOCKNER, 1987-1993) focused only on the Malian side of the Kédougou – Kéniéba Inlier, namely the part between the Senegal – Mali border (represented by the Falémé river) Westward, and the Tambaoura escarpment, to the East and North (known as the Kéniéba Inlier). The mapped area spreads Southward, down to Latitude 13°N.

Three volcano-sedimentary formations have been identified within the Kédougou-Kéniéba Inlier (see Figure 6-1):

- The Saboussiré formation (Mako Supergroup in Senegal);
- The Kofi formation (Daléma Supergroup in Senegal); and
- The Kéniébandi formation (Dialé Supergroup in Senegal).

The Saboussiré Formation is located in the Western part of the Kédougou-Kéniéba Inlier and is composed of a thick pile of volcanic, volcano-plutonic and sedimentary rocks. The formation is subdivided into three lithologic units:

- A basic igneous unit, composed of discontinuous thick intercalations within the volcanic sequences;
- A volcanic rock unit, of intermediate to basic composition (subdivided into a lava flow facies and a pyroclastic facies); and
- A heterogeneous metasedimentary unit that is transitional with lava flow and pyroclastic facies.

The Kofi Formation is located in the Eastern and Southeastern side of the region (along the Tambaoura escarpment) and is comprised of metasediments (sandstones and shales). These rocks form thick successions with sub vertical foliation, whose regional strike direction ranges from NNE in the southern part of the area to NNW in the north.

- The sedimentary sequences within the Eastern side are composed of alternating metasediments: sandstones/greywackes (sometimes with a carbonate cement) and schists. Intercalations of black quartzite occur locally.
- The Western side is distinguished by the occurrence of sandstone layers with tourmaline cement. These hard and massive rocks form prominent hills. The rocks include a large variety of facies: coarse (microconglomeratic) sandstone, medium to fine sandstone (greenish-grey colour and massive texture) and jasper-like sandstone (deep grey colour).
- Towards the Western side, volcanic sequences occur locally: lava flows and pyroclastic rocks of intermediary to acid composition are quite rare and strongly weathered.
- A sequence of marbles has been identified towards the NE of Sadiola.

The Kéniébandi Formation crops out in the central part of the region. Major shear zones form the Western and Eastern boundaries of this formation.

The Kéniébandi Formation is represented by thick successions of metasediments (mainly sandstones) with a sub horizontal to moderately inclined dip. The metasediments are comprised of the following: medium to coarse greywacke with carbonate cement, (often microconglomerates), representing the major part of the formation; polymictic conglomerate (forming elongated lenses) interbedded within the greywacke; and metavolcanic rocks (lava flows, breccias and tuffs) of basic to intermediate composition; these form discontinuous intercalations but have considerable extension.

Intrusive Rocks Several intrusive types of variable form, dimension and composition occur in the Kédougou-Kéniéba Inlier. Four type of intrusion can be distinguished at a regional scale:

- Elongated plutons, often with oriented fabric, large dimensions and intermediate to acid composition (Farabana, Birmassou, the intrusives Westward and northward of Dialadian and plutons that are probably part of the Saraya intrusive, Senegal). These occur in the Northwest and South of the region.
- Small intrusions with round, isometric shape, of variable dimensions, and granitic to granodioritic composition.
- Multiple dykes of small dimensions formed of basic and intermediate rocks (gabbro and diorite).
- Two dyke systems (in the NW and S sectors of the Kédougou-Kéniéba Inlier) of granodioritic composition.

Structure The Kofi Formation, on the east side of the Kédougou-Kéniéba Inlier has a regional strike of 340°. In the central and western areas underlain by the Kéniébandi and Saboussiré Formations the regional strike direction varies between 020° and 040°. These regional features are readily identified on LANDSAT TM imagery. Lineations observed on the imagery correlate well in the field with bedding and/or foliation.

Work in the field has identified several strike-slip faults that cross through the region. The main shear corridors with apparent sub vertical dip that have been identified in the Kédougou-Kéniéba Inlier are the following:

- The Senegal-Malian Shear Zone, developed between Sadiola (North) and Djidian-Kéniéba (South), with an average direction of N170° representing the tectonic contact between the Kofi formation (East) and Saboussiré and Kéniébandi formations (West).
- The Kakadian-Kérékoto Shear Zone, a North-South trending regional structure that separates the Kéniébandi formation (East) from the Saboussiré formation (West). The shear zone affects the elongated intrusive of Farabana (North) and the Kakadian basic magmatic complex.

These shears do not deform the round-shaped plutons (intermediate and acid composition) and the basic dykes.

Other important faults present the following orientations: E-W to ESE, NE and NW.

The aerial photograph and LANDSAT TM imagery study has allowed identification of a great number of linear structures several kilometres long and fine litho-structural features characteristic of the regional structure of the volcano - sedimentary lithologies.

6.1.2 Geology of the Kofi Project Area

Based on their integration of the field observations, soil anomalies, drilling results, satellite image and geophysical interpretation AXMIN's geologists have proposed the following geological model for the Kofi area (see Figure 6.2):

Lithology

The major lithological boundaries in the licence are aligned in a general N-S direction, only a few strike NNE or NE, however, the bedding has a general NNE to NE direction, dipping steeply to the west. The following lithologies have been identified:

- A dominantly-greywacke formation that has phyllite and few quartzite intercalations. This represents the most common lithology and is developed in the Central, Eastern and Southern side of the Kofi licence.
- A black quartzite unit with intercalations of phyllite occurs in the Central-eastern part of the licence. The quartzite forms two parallel bands, trending N-S, in Kofi South prospect (100 to 250m thick) and one long band, trending NNE that traverses Kofi Southeast and Northeast (500-600m thick). **The unit is locally brecciated and silicified with vein stockworks.**
- A quartzite formation with greywacke intercalations occurs in Kofi Southwest and Northwest and in the Kofi South-South prospect. This unit strikes N-S, NW or NE and is 100m to 1 km thick. Quartz-tourmaline sandstone lens-shaped units occur within the quartzite ± greywacke formation as well-individualized ellipsoidal bodies 10 to 300m thick. **The unit is locally brecciated and silicified with vein stockworks.**
- A phyllite formation with thin greywacke intercalations is found in the Western part of the licence.

The formations are intruded by E-W and NE-trending basic dykes (dolerite and gabbro) and by post-tectonic granites (Kofi South-South Prospect).

Structure

The most important structures in the Kofi licence can be observed on satellite images and on airborne geophysical data. Some of these structures were also identified in the field. Exploration has revealed that the Kofi area is intensively tectonized: at least two major NNE trending shear zones and several NW and NE fault systems cross the area.

A broad (6km wide) NNE trending zone of shearing bounds the Loulo-Yalea-Babota gold occurrences on the Randgold property to the southwest of the Kofi licence and passes through the west and northeast sector of the Kofi project area.

A series of NNW trending structures trend through the south and south-central sector of the Kofi licence on trend from Semafo's Segala gold occurrence immediately to the southeast of the Kofi licence.

A series of NW and E-W trending structures have also been identified on the airborne geophysics and satellite images. Based on the aeromagnetic data these trends may be younger faults that are locally intruded by mafic dykes. The NW fault structures appear to be the latest tectonic event.

Table 6.1
Table of Formations
Western Mali

PHANEROZOIC

POST PROTEROZOIC TO CENOZOIC
Residual soils, hardpan, sand
Sandstone
UNCONFORMITY

PRECAMBRIAN

PROTEROZOIC
UPPER PROTEROZOIC
UNAMED FORMATION
Post-Orogenic Sandstone
UNCONFORMITY

LATE DYKES
Diorite-Gabbro
INTRUSIVE CONTACT

POSTTECTONIC FELSIC INTRUSIVES
Granite-granodiorite batholiths
INTRUSIVE CONTACT

SYNTECTONIC FELSIC TO INTERMEDIATE INTRUSIVES
Foliated, elongate granodiorite-diorite batholiths
INTRUSIVE CONTACT

LOWER PROTEROZOIC (Birimian Equivalent)
KENIEBANDI FORMATION
Thick succession of metasandstone with flat to moderate dips.
KOFI FORMATION
Dominantly metagraywacke, sandstone and schist with intercalated black quartzite. Tourmaline cemented sandstones on west side of unit along with minor volcanics and marbles.
SABOUSSIRE FORMATION
Dominantly mafic to intermediate volcanic flows and pyroclastics with associated metasedimentary rocks

ARCHEAN

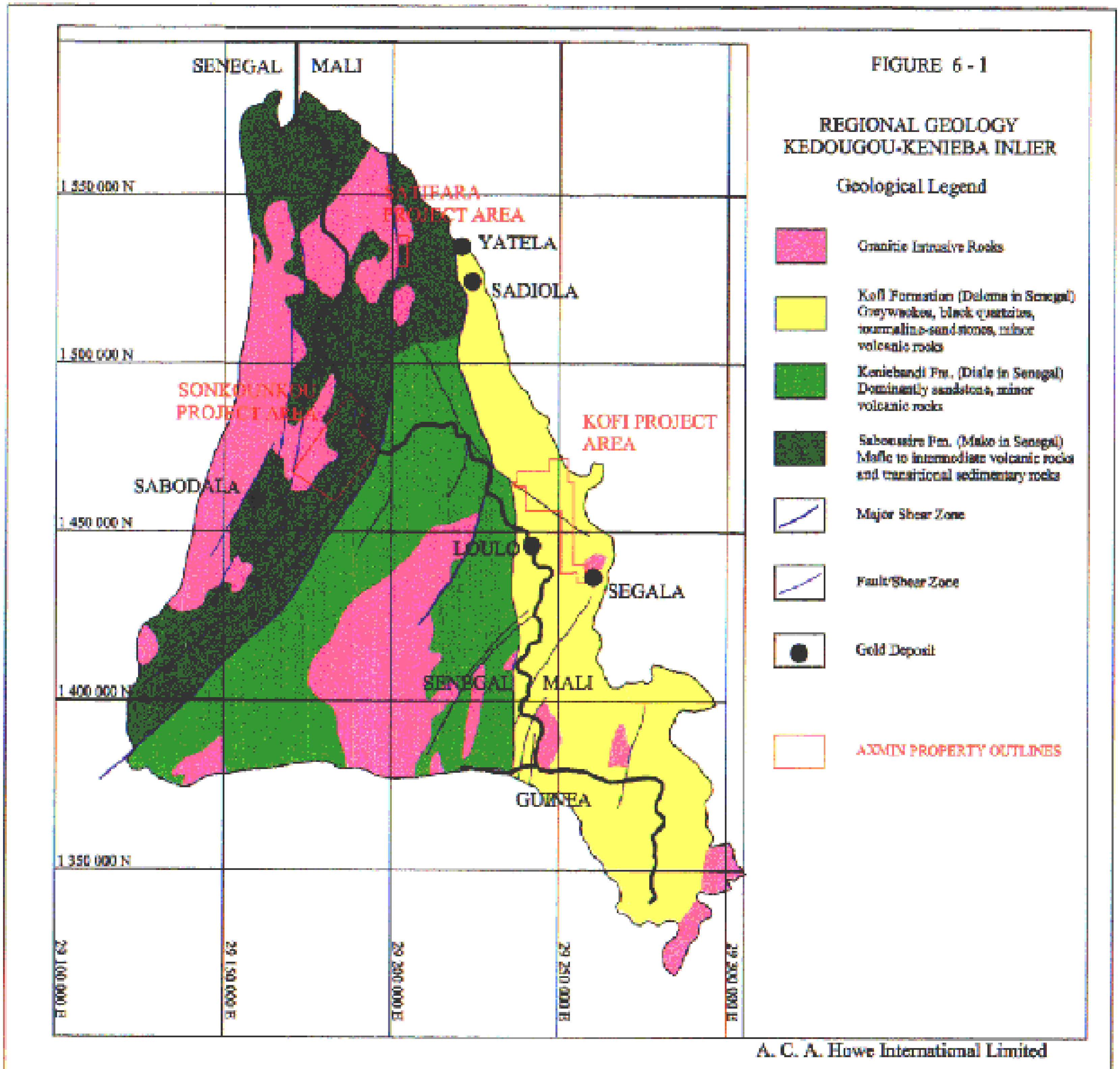
FIGURE 6 - 1
REGIONAL GEOLOGY
KEDOUGOU-KENIEBA INLIER
Geological Legend
Granitic Intrusive Rocks
Kofi Formation (Dalema in Senegal)
Greywackes, black quartzites,
tourmaline-sandstones, minor
volcanic rocks
Keniebandi Fm. (Diale in Senegal)
Dominantly sandstone, minor
volcanic rocks
Saboussire Fm. (Mako in Senegal)
Mafic to intermediate volcanic rocks
and transitional sedimentary rocks
Major Shear Zone
Fault/Shear Zone
Gold Deposit
AXMIN PROPERTY OUTLINES
SENEGAL
MALI
SATIFARA
PROJECT AREA
YATELA
SADIOLA
SONKOUNKOU
PROJECT AREA
KOFI PROJECT
AREA
SABODALA
LOULO
SEGALA
SENEGAL
MALI
GUINEA
1 550 000 N
1 500 000 N
1 450 000 N
1 400 000 N
1 350 000 N
29 100 000 E
29 150 000 E
29 200 000 E
29 250 000 E
29 300 000 E
A. C. A. Howe International Limited

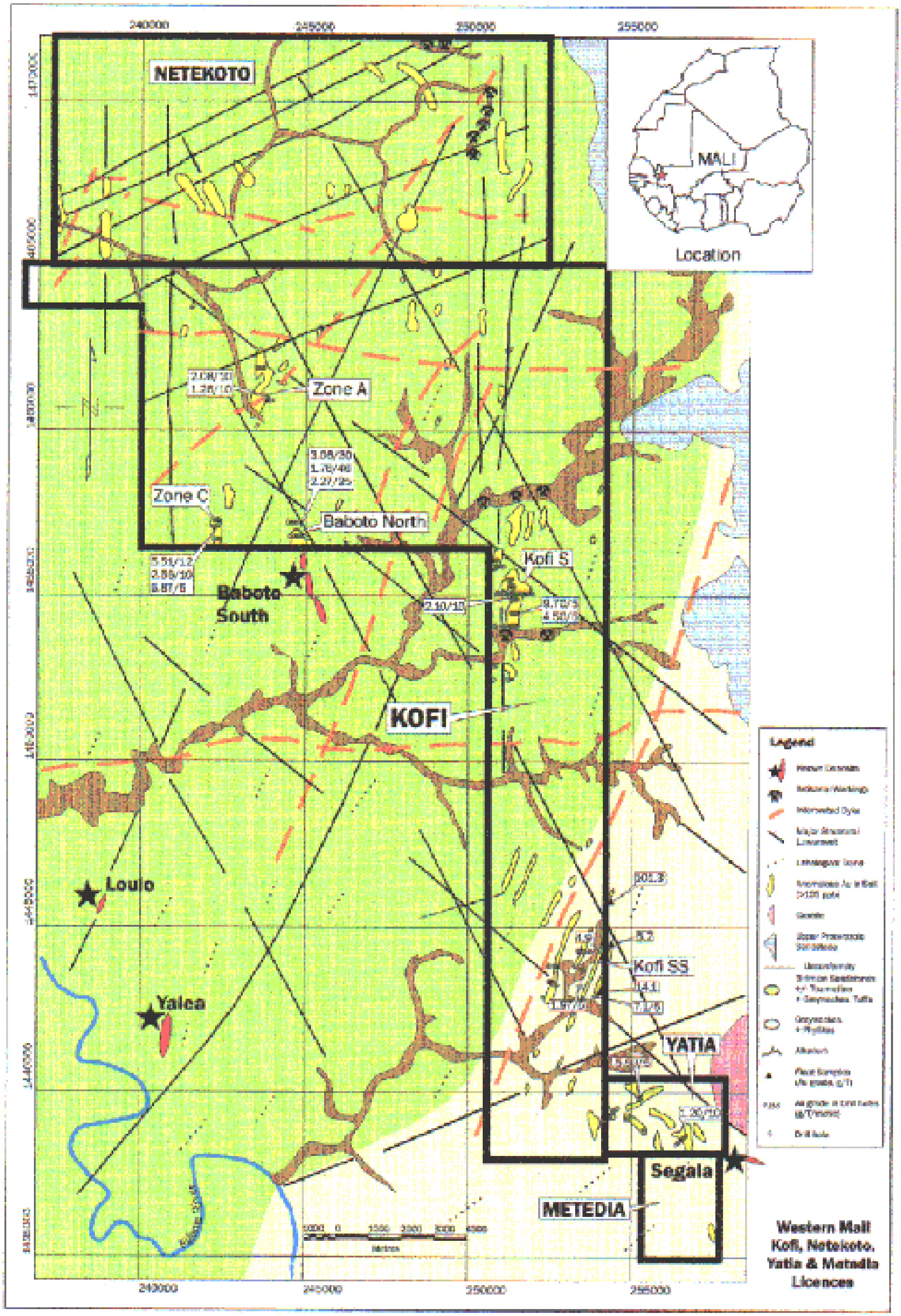

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FIGURE 6-2

Mineralisation

The gold mineralisation identified in the Kofi licence relates to three different geological settings:

a) Contact between quartz-tourmaline sandstones and quartzite; the gold mineralisation develops in quartz stockworks in NNE or NNW fractures, occurring on or near the contact between the two formations along NNW or NNE shears. This is found in Kofi S-W zones A, B and C.

b) NNE shear zone / fold nose along the contact between greywackes/phyllite and black quartzite. The gold mineralisation develops in quartz-sulphide stockworks along the shear and in the fold hinge. This type of mineralisation was identified in the Kofi South prospect.

c) Quartz veins around a post-tectonic granite, typical of Kofi South-South prospect.

6.1.3 Geology of the Satifara Project Area

The geology of the Satifara licence consists of:

- Intrusive rocks (granite, granodiorite and diorite) in the western area of the licence.
- Saboussiré Formation metasediments (greywacke, sandstone, silt and marble) in the eastern part of the licence.

The contact between the intrusives and metasediments strikes NNW and has the same orientation as the main tectonic alignment (the Senegalo-Malian shear zone) in the area. The gold soil anomaly has the same trend and probably is related to the contact between the two formations. The geological observations suggest that an E-W transform fault system cuts this structure. The fault system induces a sinistral movement, the southernmost block having the biggest offset. Within the sedimentary formation, a variation of texture (coarseness from sand in the west part of the property to pelite in the east) and chemistry (increase of carbonate content going eastward) was observed. While in the northwestern area the sedimentary rocks are represented mainly by greywackes, in the southeastern side the pelitic aspect with increased content of carbonate prevails.

6.2 DEPOSIT TYPE MODELS FOR MALI

6.2.1 Introduction

The gold deposits of Mali are typical Birimian type gold deposits similar to those that occur elsewhere in the West African Craton, and particularly in the Ashanti Belt of Ghana, which is the type area for the deposits (See Section 3.0)

6.3 KOFI PROJECT AREA

6.3.1 History of Kofi Project and Surrounding Area

The first regional reconnaissance work dates from the colonial period. The Kédougou–Kéniéba Inlier has been studied in more detail than the Kayes Inlier. Various international scientists made studies from 1913 to 1958.

Additional detailed studies were made after the independence of West African countries during the period 1966-1987.

In 1986 the Dynamic Geology Laboratory of the University of Marseilles produced a Photo-Geological Map (1:200,000 scale) based on aerial photography and a few check traverses.

In 1987, the European Development Fund (F.E.D.) financed an exploration program called "Project Mali West". The objective of the program was the geological mapping and inventory of the mining potential within the Kayes and Kéniéba inliers. KLOCKNER (a German exploration company) in collaboration with the National Direction of the Geology and Mines Mali (DNGM) produced in two stages: "Project Mali West I" (1987-1989) and "Project Mali West II" (1991-1993).

Project Mali West I (1987-1989)

Between 1987-1989 the following activities were carried out:

- Geological mapping of the Kankossa, Kayes, Kéniéba and Bakel; sheets at the 1:200,000 scale
- A regional soil sampling program over 9000 km² (1000m x 250m grid). Samples have been analysed for gold and multi-elements.

Following this program, four areas with important gold soil anomalies have been identified:

- Yatéla and Sadiola-Dinguilou, in the Kéniéba Inlier;
- Dag-Dag and Boutounguissi in the Kayes Inlier.

The world-class gold deposit Sadiola was identified following this program.

Project Mali West II (1991-1993)

The first stage of the Project Mali West II (1991) identified the following:

- Two anomalous zones and nine isolated anomalies in the Dag-Dag area;
- Two anomalous zones and one isolated anomaly in the Yatéla sector;
- Two anomalous zones and twenty-three anomalies isolated in the sector of Boutounguissi.

Work consisted of follow-up soil sampling (100m x 50m, 500m x 50m sample spacing grids), termitaria and rock chip sampling, pitting and trenching and geological mapping (1:1000 scale).

The second stage of exploration (1992-1993) comprised follow-up soil sampling (50m x 50m, and locally 25m x 25m), pitting and trenching.

BHP Minerals (1994-96)

In 1994-96, BHP Minerals carried out exploration over an area to the east of the project area that included the Metadia licence. BHP soil sampling outlined two gold –arsenic anomalies; one in the south-east part of the licence, strikes NNW, is 1 kilometre long and has a maximum value of 2680 ppb gold; the other is located in the northern part of the licence is 800 metres long, and has a peak value of 2620 ppb gold. BHP positioned 15 trenches on the two anomalies with no significant results reported.

African Goldfields Corporation (1997)

In 1997 African Goldfields completed a soil sampling and trenching program over the gold-arsenic geochemical anomalies outlined by BHP on the Metadia licence and confirmed the BHP data. African Goldfields geochemical results indicated that the BHP trenching was mislocated.

6.3.2 Exploration Work by AXMIN (1998-2000)

AXMIN commenced exploration in Mali in October 1998 (1998-99 dry season).

Soil Geochemical Surveys, Geological and Geomorphologic Mapping

Based on prior regional soil geochemical surveys (Project Mali West and BHP Minerals) and analysis of satellite imagery and regional geophysical data, four areas (Yatia Licence, Kofi South, Kofi North-East, and Kofi South-West) were selected for soil geochemical follow-up in 1998 on a 400 x 100 metre grid. The 1998 soil samples were assayed for gold and by ICP for a multi-element suite. Based on a review of the multi-element data from 1998 AXMIN concluded that there was a correlation between the gold geochemical trends and the ICP arsenic geochemical trends. However, given the long turn-around time and additional cost of the ICP analyses AXMIN concluded that the ICP data was not significantly adding to the management of their exploration program and beginning with the 1999 exploration program, the multi-element assays were stopped.

During the geochemical sampling programs, geological and geomorphologic mapping were completed. Due to the regional development of residual soils, there is very little outcrop, however, abundant fragments of material resistant to weathering can be observed and remnant geological structures may be locally observed. Given the characteristic siliceous nature of most gold mineralisation in the region, gold bearing zones are generally one of the less weathered materials available for observation in the residual soils. Such material was routinely sampled and assayed by AXMIN as part of their geological mapping program.

Based on the 1998 gold geochemical data six areas (Kofi South-A, Kofi North-East-A, Kofi North-East-B, Kofi South-West-A, Kofi South-West-B, and Kofi South-West-C) were selected for infill follow-up geochemical sampling in 1999 on a 100 x 50 metre grid. Only gold was assayed in the follow-up program and due to weather conditions and other local factors, some of the grids could only be completed on a 200 x 50 metre grid.

The Yatia licence was covered by a 100 x 50 metre soil-sampling grid during the 1999 field program.

In 2000, the regional (400m x 100m) soil grid was extended over the whole project area in four sectors designated Kofi South-East, Kofi South-South, Kofi North-West, and Kofi North-North-West

Based on the second phase of regional soil grids, infill sampling was undertaken over seven areas designated Kofi North-West-A, Kofi South-East A, Kofi South-South-A, -B, –C, -D, and –E.

The 1999 and 2000 grid locations are shown in Figure 6-3.

Trenching and Pitting

Trenching and pitting were carried out only in the Kofi South-West-A, -B, and -C areas. The work was hand-dug and very difficult due to the hardpan and large rock fragments encountered. Labour problems and the start of the rainy season resulted in termination of the program.

Drilling Program

Kofi Licence

Drill programs were undertaken in June-July 1999 and April-July 2000. The 1999 program comprised 68 reverse circulation and 17 reverse air blast holes, which were completed by two contractors for a total of 4,776 metres. The 2000 program comprised 101 reverse circulation holes for a total of 6,586.5 metres.

The 1999 program was designed to test the gold soil anomalies identified during the 1998-99 sampling programs. Anomalies partially drill tested were located in the Kofi South-A and Kofi South-West-B areas.

During the 2000 program, drilling continued in the Kofi South-West-A, and -B areas and was initiated in the Kofi South-West-C and Kofi South-South-A area.

Significant technical and weather problems have been encountered in both drill programs that have caused delays and premature termination of programs. Neither of the two drill programs fully completed their objectives and more drilling is warranted on the project. Significant drill results are summarised in Section 6.3.3.

Metadia Licence

Drilling in the Metadia licence took place in May 2000. Three reverse circulation holes totalling 180 metres were completed. No significant mineralisation was noted in the sample logging and only three samples reported greater than 200 ppb gold (hole MEC–1, 10 to 15 metres, 710 ppb, 50 to 55 metres, 580 ppb; hole MEC-2, 20-25 metres, 280 ppb).

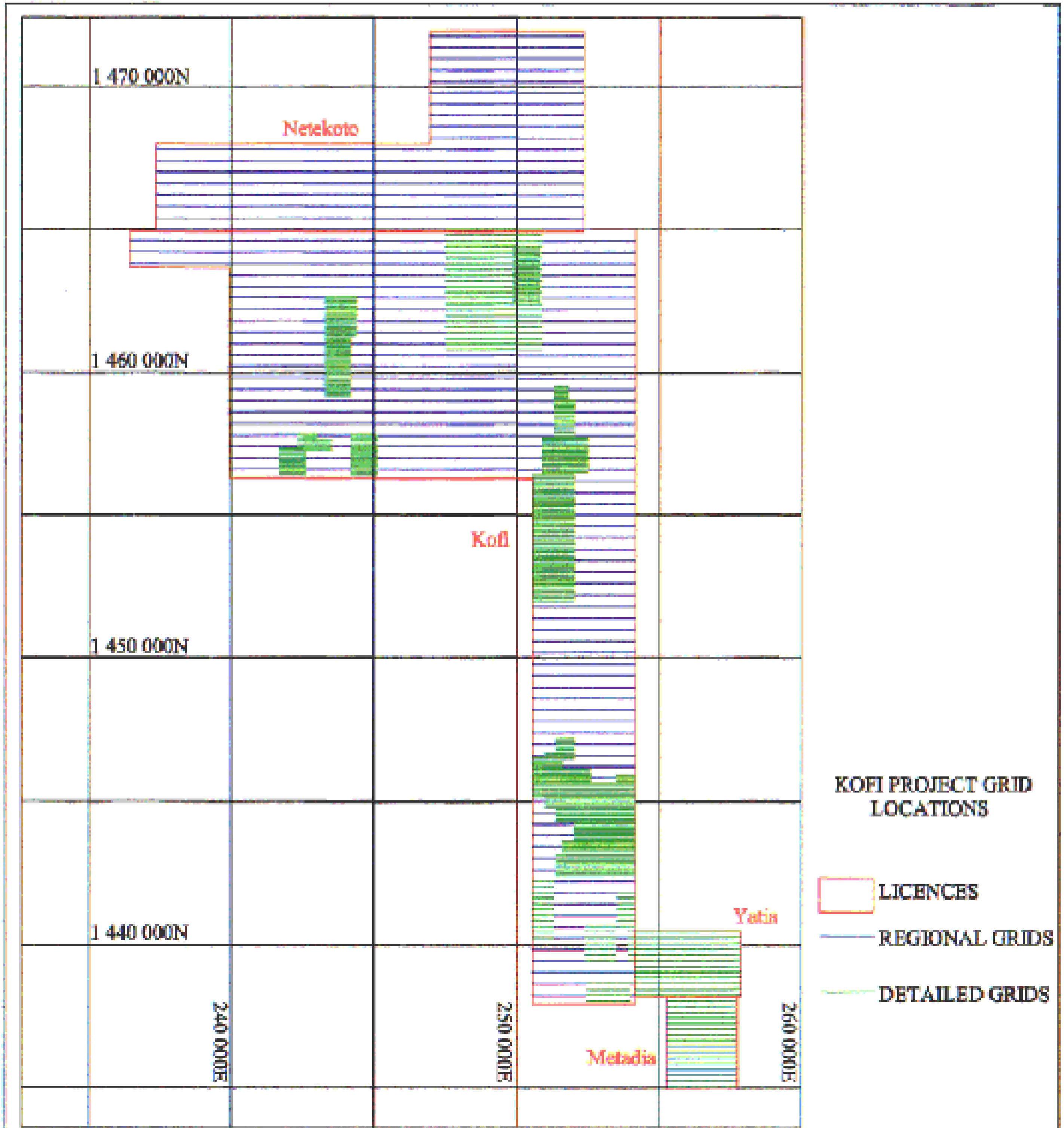

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FIGURE 6-3

Yatia Licence

Drilling in Metadia licence took place in May to June 2000. Thirty-one reverse circulation holes totalling 1,861 metres were completed on six drill section lines. Discontinuous quartz-pyrite-carbonate stockworks within greywacke were noted in a few holes. Only two assays over 1 ppm were returned (hole YSC-1, 40 to 45 metres, 1.51 ppm; and hole YSC-30, 35 to 40 metres, 5.53 ppm). Although this licence has expired, efforts are in progress to complete its renewal and expansion.

Drill hole locations are shown in Figure 6-2.

6.3.3 Mineralisation and Exploration Targets

6.3.3.1 Overview

The target areas described in Sections 6.3.3.2 to 6.3.3.8 are the areas in the Kofi project that are considered to currently warrant additional follow-up work. All existing targets should be fully reassessed upon completion of the next phase of exploration. The locations of the targets are shown in Figure 6-2.

There are no substantial targets remaining on the Metadia Licence that warrant additional exploration at this time.

In the Netekoto Licence area, there are numerous gold soil geochemical anomalies on trend from Kofi Licence anomalies that will be further tested during the next phase of exploration. Some of these Netekoto anomalies may warrant additional exploration based on the results of the next phase.

Figure 6-2 provides the location of the primary targets that are recommended for additional follow-up in the next phase of exploration on the Kofi Project.

The following descriptions of the seven primary exploration targets are extracted from AXMIN's project summary for 2000.

6.3.3.2 Kofi South-West-A

The Kofi South-West area is on trend with the Randgold's Loulo-Babato gold trend. The Loulo deposit (resource 31 million tonnes grading 3.7 grams gold/tonne) is approximately 10 km SSE of Kofi South-West.

Geology and Soil Geochemistry

The follow-up grid is centred on a 400m long and 60 to 100m wide tourmaline sandstone/quartzite hill. "Outcrops" (in residual soil) of silicified and brecciated rocks with local areas of strong quartz stockworks were noted during the geological mapping. Several anomalous gold assays (0.5 to 4 ppm gold) were returned from rock samples taken on the grid.

This primary soil gold anomaly (Zone A) has a well-defined shape. It is about 600-700m long, trending 026° and has an average width of 100-200m at the 50 ppb Au contour (peaks up to 2525 ppb Au). The anomaly overlies a suit of red-pink metasandstone and quartz tourmaline sandstone (QTS). The red-pink metasandstone has an intense argillic alteration (unlikely to be related just to weathering) and sometimes a well-developed white quartz stockwork with cubic box work filled with Fe oxide hydroxide. Close to the QTS a thin (a few meters) silicified breccia occurs. The contact between the quartz tourmaline sandstone and pink-red sandstone is not visible, however, the QTS seems to overlie the red formation. Both dip to the West.

A second soil anomaly (Zone A-South with a 25 ppb threshold) is located in the south-central part of the infill area. The anomaly is related to the main QTS hill; some spotty high values continue along the same trend, toward the North of the hill, on a ferricrete plateau.

The six trenches dug on the main QTS hill revealed well-developed quartz stockwork, with leaching features. The gold grade is higher in the deepest, most-southerly trench and thin brecciated aspects were observed. Therefore, one would expect to identify higher gold grades related to quartz stockwork within the QTS formation at a greater depth (below the leaching level).

Drilling – South-West-A

This area was drilled during the 2000 program with AMCO Drilling International. The 11 RC holes on two drill fences had a productive metreage of 725m with each fence testing a separate gold geochemical anomaly. Drilling on line 60925 was difficult as the RC hammer was blocked by wet clays. In order to test the designated area, scissor holes were drilled. Finally, casing was necessary to get through the wet clay formations.

Lithology The two drill lines identified three main units: quartzite, quartz-tourmaline sandstone and a unit comprising alternating sequences of greywacke, quartzitic sandstone and siltstone. On the southern line, a basic intrusive (gabbro) was intersected. The quartzite is more developed on the northern line and the alternating sedimentary sequences are more developed on the southern line. The lithologies are interpreted to dip to the west at steep angles. The weathering profile varies according to the lithology, being more developed within the greywackes and siltstones. These are oxidised down to a vertical depth of 35m while the more compact quartzite are oxidised only down to a vertical depth of 10-15m.

Mineralisation Gold mineralisation has been identified only on line 1460925N, some of the better intersections follow (See Figure 6-4):

- KWAC 1 (10m @ 2.08 g/t, 5m @1.21 g/t, 5m @ 0.31 g/t)
- KWAC 1A (5m @ 0.43 g/t, 3m @ 0.39 g/t)
- KWAC 1B (10m @ 1.26 g/t)
- KWAC 2 (15m @ 0.80 g/t, 10 @0.46 g/t, 9.5m @ 0.22 g/t).

The gold mineralisation is hosted by quartz veinlets showing oxidation.

6.3.3.3 Kofi South-West-B

Zone B is located on the south-central side of the original grid. It represents the northern extension of Randgold's Baboto North anomaly. The follow-up soil grid covers 1200m by 900m, 217 soil samples were collected.

Geology and Soil Geochemistry

A wide hill of tourmaline sandstone/quartzite outcrops over the central part of the infilling grid. It has a general N-S to NNW-SSE trend and is 500m long and 50 to 300m wide. A large ferricrete plateau masks the outcrops on the northern side of the grid.

The hills are bordered on their eastern side by three soil gold anomalies from the original grid (104, 238 and 566 ppb) over a ferricrete plateau. A 100m long Randgold trench was identified immediately to the south of the last line.

The tourmaline sandstone hill is rich in denser-looking quartz stockwork than in Kofi South-West-A. The stockworks have a few ex-carbonate vugs and sulphide box works and are aligned along two major directions: N110-120° and E-W. A series of small hills formed of black silicified quartzite/siltstones were observed on the Eastern side of the tourmaline sandstone hill.

The follow-up soil sampling revealed a soil gold anomaly with a complicated shape, probably due to the different morphology and rock features.

The geology is dominated by the same QTS formation (with dense white quartz stockwork, and leaching features), which outcrop mainly on a N340° trending hill. Small outcrops of weathered and lightly to intensely ferruginous QTS occur in the southern part of the zone, rising from the ferricrete plateau. In the extreme southeast, grey quartzite outcrop (sometimes with fresh sulphides). The relationship between QTS and the quartzite is not clear. Rare red sandstones and black quartzite outcrop eastwards of the main QTS hill.

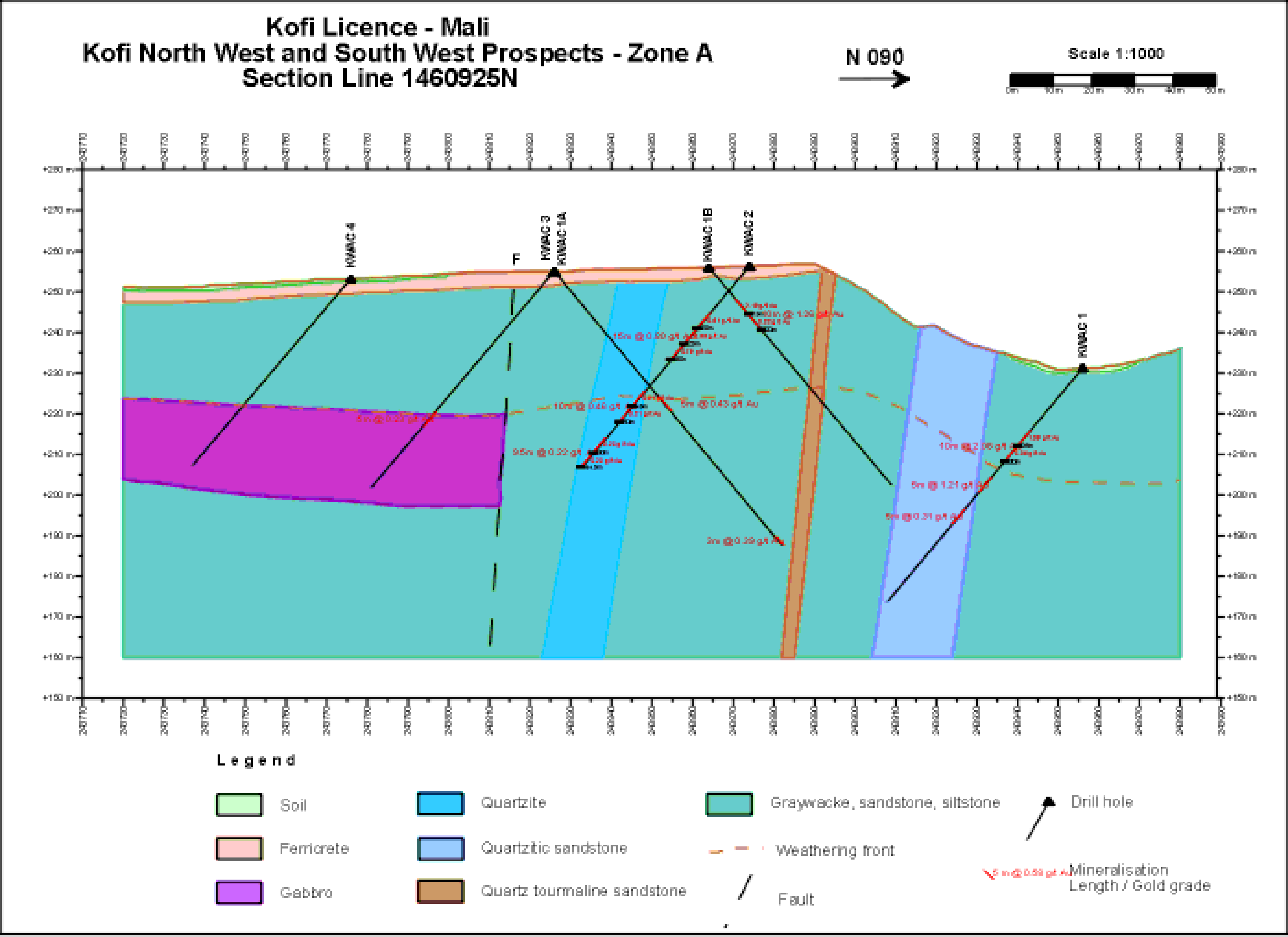

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Figure 6-4

The shape of the anomaly is discontinuous due to the different soil types in the area. Higher gold grades are found to the south on the lateritic plateau, and decrease to the north on the QTS hill. The outcrops are scarce; therefore the geological interpretation is for the most part inferred.

The main geological features of Zone B follow:

- The quartz tourmaline sandstone formation (QTS) occurs in several different facies and dominates the geology in this area. The QTS covers all the western part of the infill zone and has a NNW general trend.
- The eastern part of Zone B has a more complicated and varied geology with red quartzitic sandstones, greywackes and ferruginised siltstones.

The geomorphology is more complicated in the East than the West.

- The west of Zone B is formed by a wide ferricrete plateau over QTS; its direction changes from NNW to NNE in the west-central part of the zone.
- The eastern part of Zone B has a rugged relief with many small hillocks (made of ferricrete, greywackes and ferruginised siltstones) and two main E-W trending drainage channels. It has a lower relief than Zone B.
- The QTS outcrops may influence the NNW-trending soil gold anomaly. The geomorphology, the relative positions of the rock formations and the tectonic/microtectonic features observed on the QTS outcrops suggest a series of successive E-W offsets that give the hill a general NNW trend. The lower gold grades can be related to the overburden soil-type and geomorphology.

Drilling South-West-B

Kofi South-West-B was drilled during the 1999 program (Drill Sure International) and during the Year 2 program (AMCO Drilling International). RAB drilling was performed during the first year program; the 10 drill holes totalled 477m. A total of 1,099m were drilled in 13 RC drill holes during the second year program.

Lithology The drilling performed over two lines spaced at 400m identified a main unit (50-80m thick) of quartz-tourmaline sandstones, with variable coarse to fine grain size. The quartz-tourmaline sandstone overlies quartzite and alternating sequences of greywacke, pink sandstone and siltstone. The lithologies are interpreted to dip steeply to the west. Oxidation extends between 10m (quartz-tourmaline sandstones, quartzite) and as deep as 100m, within the greywacke / sandstone / siltstone.

Structure Airborne geophysics and satellite imagery interpretation suggest the presence of the following structures: a north-south trending fault (probably a shear corridor) that also represents the contact between two different lithological formations and a NW secondary fault. All of these features have been identified with the soil sampling program, geological mapping and the drilling program.

Geological mapping revealed that the investigated area comprises a series of north-south trending hills formed of quartz-tourmaline sandstones; the outcrops were rich in milky quartz stockworks, developed on NE and NW trending openings. The hills lie along the northern extension of the Baboto mineralisation, intensively investigated by Randgold. The Baboto mineralisation represents a series of three bodies of about 500m each, aligned on a 3km N-S structure; better intersections obtained by Randgold include 60m @ 3.03g/t and 44m @ 1.32g/t.

Drilling identified the north-south trending contact between a quartz-tourmaline sandstone unit, to the West and quartzite / greywacke / siltstone, to the east. The mineralisation also intersected line 56800N, developed along/near this contact.

Mineralisation Drilling on line 56800N identified two zones of sub vertical mineralisation hosted by a grey quartz-sulphide stockwork in quartz-tourmaline sandstone (western mineralisation) and a quartz-carbonate stockwork ± pyrite in quartzite (eastern mineralisation). The western mineralisation has been intersected by drill holes KWBC 11 (34m @ 1.75 g/t) and KWBC 21 (10m @ 1.27 g/t) while the eastern mineralisation has been intersected by drill holes KWBB 5 (46m @ 1.76 g/t) and KWBC 12 (55m @ 1.89 g/t) (see Figure 6-7). It is interesting to note that none of these drill holes were anomalous in visible gold from panning, suggesting that gold must be very fine grained.

6.3.3.4 Kofi South-West-C

Zone C is located on the southwestern side of the original grid. It covers 900m by 1500m and was positioned over soil gold anomalies with peaks of 233 ppb Au, 67 ppb Au, 72 ppb Au and 236 ppb Au on a general NNE direction over 4 lines. A total of 266 soil samples were collected in the area.

Geology and Soil Geochemistry

The geology looks similar to Zone B, but with flatter morphology. A series of 150m long and 30m wide tourmaline sandstone and quartzite hills (type Zone B, but smaller and with less quartz stockwork), trending N320° over 1 km were identified. Chip samples in the quartzite returned a value of 318 ppb Au.

Geomorphologically, Zone C is divided in two parts along an E-W direction, at the UTM coordinate 1454850N. The northern part forms a very large ferricrete plateau on which several fragments of granitic rock and basic intrusives rocks were identified. The southern part has lower relief with some outcrops of QTS and quartzite.

The infill soil sampling revealed a consistent soil gold anomaly in the South probably related to QTS with dense quartz stockwork, and to grey quartzite.

The anomaly has a threshold contour of 100 ppb, a maximum of 4880 ppb (located on the ferricrete plateau) and a N-S orientation (600m long and ±150m wide, wider to the north and open to the south.

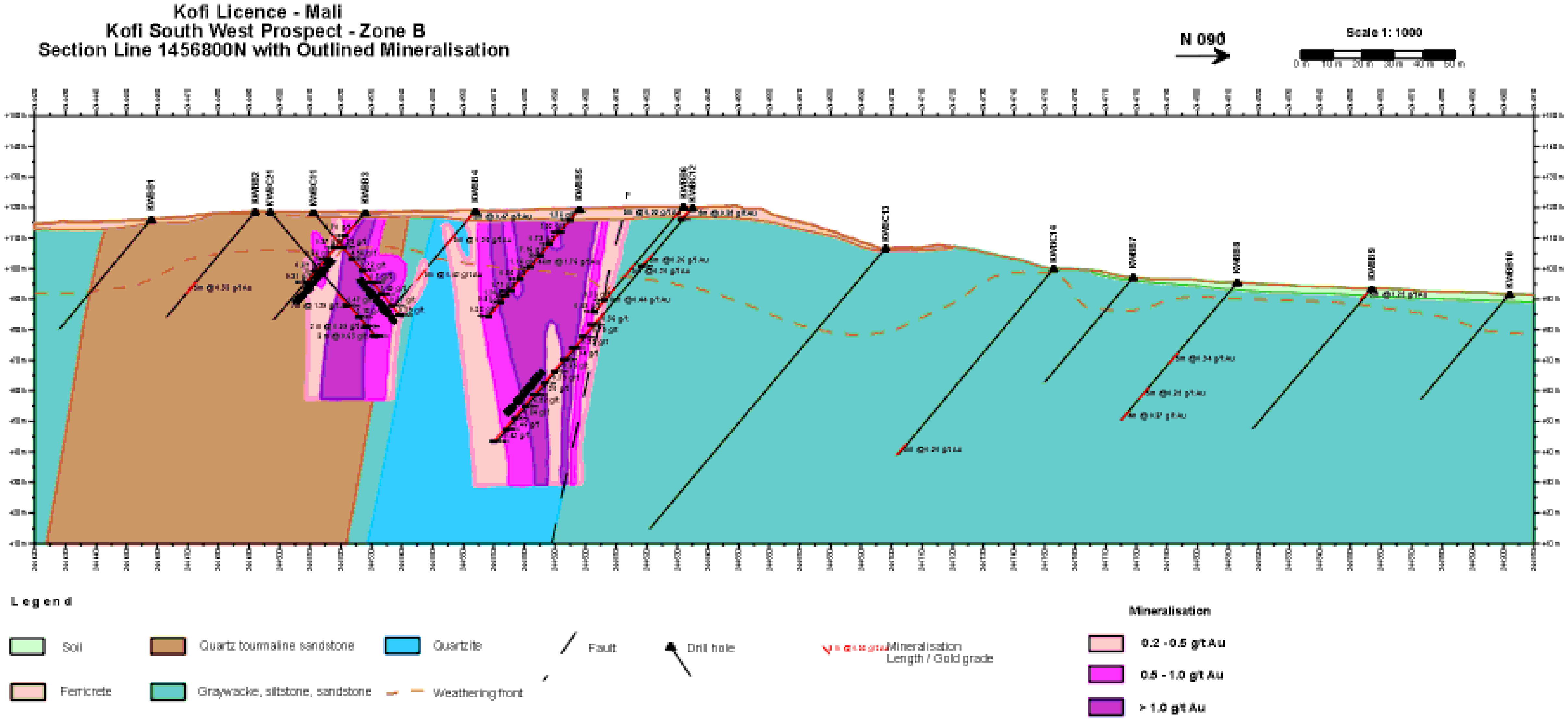

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Figure 6-5

Peaks of tens to hundreds ppb Au are aligned towards the NNE of the 100 ppb gold anomaly contour, suggesting an important tectonic alignment.

Drilling Kofi South-West-C

This zone was drilled during the 2000 program. The 11 RC drill holes reached a total productive metreage of 865.5m.

Lithology Drilling intersected alternating sequences of quartz-tourmaline sandstone, quartzite and greywacke. The lithologies are interpreted to dip steeply to the west. Oxidation extends between 10m and 100m, depending on the lithology.

Structure The structure is very similar to Zone A. The area is controlled by a major N-S trending fault (shear) along the contact between a formation predominantly composed of greywackes (to the east) and a formation composed of greywacke/quartzite sequences (to the west). The latter comprises a 60 to 150m thick quartz-tourmaline unit. All the formations have a general NNE to NE bedding and are crosscut by NE and NW faults.

Mineralisation The best gold grades were intersected on line 57100N and are related to quartz-carbonate stockworks (+pyrite) within the quartz-tourmaline sandstone: KWCC 6 (13m @ 3.46 g/t), KWCC 13 (10m @ 2.56 g/t) and KWCC 7 (5m @ 5.87 g/t). Lower gold grade mineralisation was found to continue to line 57300N, and is again related to the quartz-tourmaline sandstones.

6.3.3.5 Kofi South-A

Geology and Soil Geochemistry

Interpretation of the assay results from the infill soil-sampling grid indicates the following:

- A 2.8 km long, 100 to 600m wide gold anomaly (100 ppb threshold) located on the northern side of the follow-up grid. The anomaly has a general N-S direction with several secondary trends. The dominant trend is to the NW, with secondary N-S and NE trends. Peak values run up to 230 ppm. The anomaly is delimited to the east by a 10m high ferricrete plateau (about 600m long) with a general N-S trend. Anomalous points to the west of the plateau are related to a series of small hills (1 to 2m high) trending NW and NNW made of black quartzite. Low gold values are related to the drainage channels.
- A 1km long, 100 to 200m wide anomaly (50 ppb threshold) trending NW.

The VLF survey (March 1999) revealed a series of structures trending NE and NW and dipping westward. The soil gold anomalies are coincident with these structures. It is likely that the structures represent a NE-trending shearing corridor with NW-trending openings.

Detailed mapping was performed over the soil infill area (4.4 km by 1.4 km: 6.16 km^2).

Unfortunately, the outcrops are scarce. In addition, ferricrete covers significant parts of the area.

Mapping (rock fragments and geomorphologic observations), revealed the following lithologies:

- Black quartzite (black, rounded quartz grains in a grey-black quartzitic cement, with rare fresh pyrite and marcasite) in the centre of the infilling area, sometimes on N340° alignments
- Small hillocks made of grey quartz (with rare mm-sized dissemination of ?hematite?) in the centre of the anomaly. These could be related to the soil anomaly although the rock chip sampling did not produced significant results
- A 500-600m long “ridge” of red quartzitic sandstone, which coincides with the western border of the main anomaly
- Westward-dipping weathered phyllite in the NW
- Rare dolerite fragments, especially in the South
- Low ferricrete plateaus, especially in the Central-West

In conclusion, the geology in the infilled area consists of metasedimentary rock (terrigenous) alternating (from W to E) between phyllite and black quartzite, striking N20° and dipping to the west. The relationship between the grey quartz and black quartzite is not clear, but they seem to be closely related spatially. The red quartz sandstone is a special lithological feature and roughly delimits the western border of the Zone A soil gold anomaly.

Hydrothermal indicators are sometimes present (quartz with hydrothermal features, re-crystallisation of fissures, vugs with transparent quartz crystals, box work filled with Fe ox-hx, and fresh sulphides – marcasite, pyrite and rare dissemination of hematite have been observed), but they are not common features.

- Structural features are not obvious due to the lack of outcrop; however, a few observations were made:
- The general trend seems to be the same as the Birimian (N20°, dipping 55 to 80° to the West)
- Fine, mm-sized white quartz stockworks are frequently developed within the black quartzite. Rock chip samples taken from this rock did not return more than 20-50 ppb Au (even with fresh sulphides).
- The soil gold anomaly has sharp E-W trending boundaries (in the centre and NE), which could be related to fault systems; this suggests that the soil anomalies are controlled by tectonics in Zone A.
- The shape of the gold anomalies, in the northwestern part of Zone A, suggest an offset along a NW trend. This feature is also shown by an offset of the red quartz sandstone alignment.
- The gold anomaly in Zone B suggests a discontinuous NW trend broken along a N-S direction.

The ground geophysics survey carried out over the most of the infill area shows highly tectonized ground, with some good spatial correlation between the soil gold values and the ground geophysical anomalies.

Drilling Kofi South A

The prospect was drilled during the 1999 program by AMCO Drilling International. RC drilling was performed on 68 drill holes, RAB drilling on 7 drill holes, a total of 4,300m.

Lithology The identified sequence comprises alternating units of hard black quartzite and grey-green quartz-sericite phyllite. Individual zones of each vary between 5 to 50m in thickness; the sequence is interpreted to dip to the west. The weathering profile varies according to the lithology and amount of silicification, with phyllite oxidised down to a vertical 40m while the quartzite may exhibit fresh sulphides within 5m of surface. The water table is consistent at around 40m vertical depth.

Structure Previous geophysical and satellite interpretations had postulated the presence of a major north-south shear zone underlying the long axis of the main soil anomaly. The RC drilling has confirmed the existence of the structure by establishing that to the east of the proposed shear, lithologies are predominantly phyllite, whilst to the west there is a high proportion of intercalated black quartzite and phyllite. Silicification and sulphide development are also best developed near the structure.

Alteration The most common alteration recognised was silicification within the phyllite, typically in areas considered adjacent to N-S shear zones. The most pervasive development occurs along line 55100N, where silicification occurs over a zone about 400m in width. This zone can be traced to the north and south along the length of the soil anomaly, although the width reduces to about 50m. The zone is correlated with the main north-south shear.

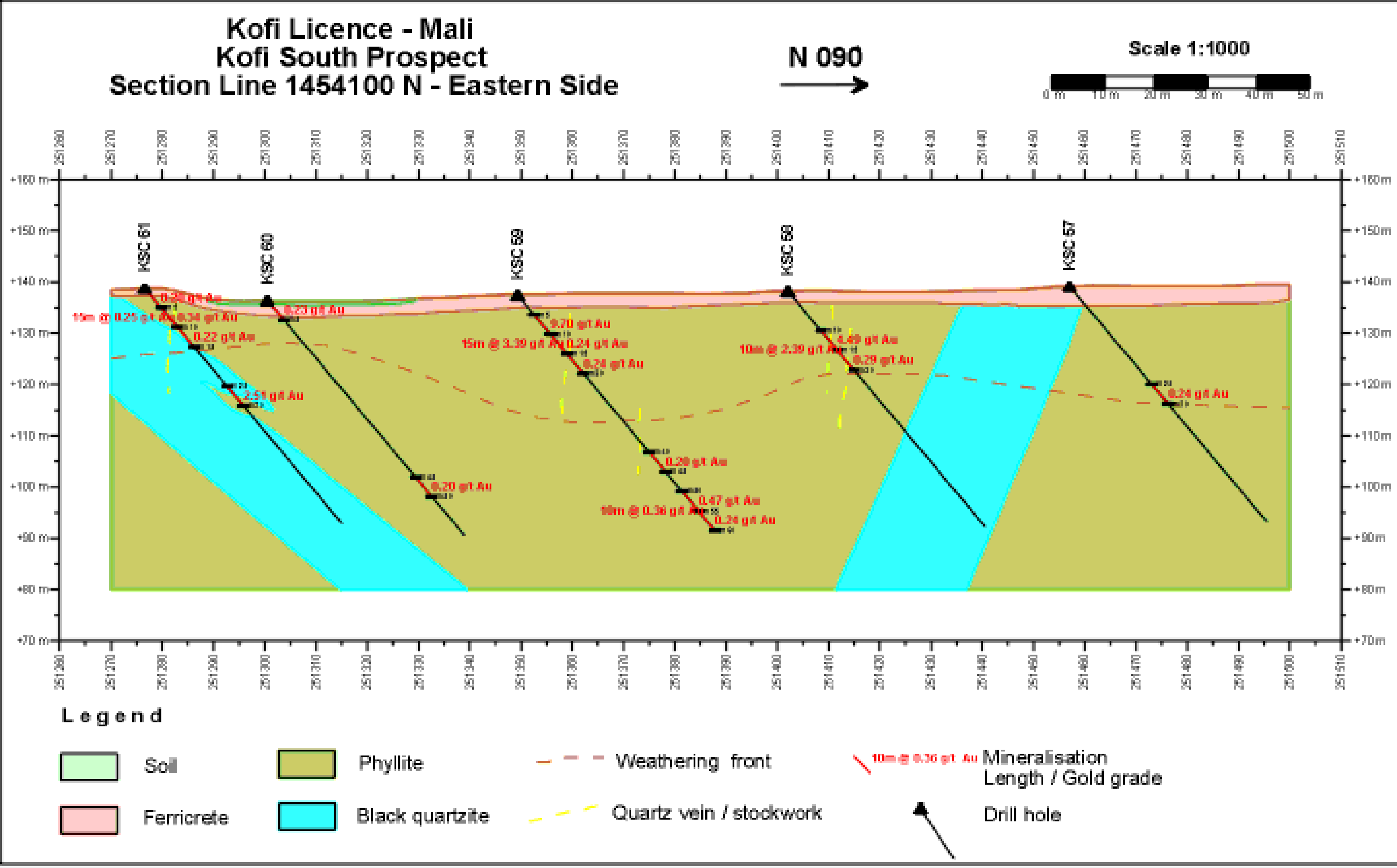
Quartz veinlets are commonly developed throughout the area although zones of quartz with an estimated plus 10% by volume are discernable over widths of up to 400m. Closely spaced carbonate veinlets (< l mm thick), often in association with quartz veinlets, marcasite and pyrite were observed in six of the holes, distributed mainly at the northern and southern ends of the anomalous soil zone. The fine-grained sulphides may be disseminated or distributed along fractures.

Mineralisation Gold mineralisation has been identified over the length of the soil anomalies, 27 holes out of the 75 drilled returned intercept averages of more than 5 metres greater than 0.3 g/t. These results are listed below (See Figure 6-6 as a representative drill section):

Line Number	Hole No.	Grade (g/t)
Line 56100	KSC 48	2.4 over 5m
Line 55900	KSC 44	0.4 over 5m
Line 55500	KSC 37	0.9 over 5m
	KSC 38	0.3 over 15m
Line 55300	KSC 32	0.6 over 10m
	KSC 34	0.7 over 5m
Line 55100	KSB 10	0.7 over 25m
	KSB 11	0.4 over 30m
	KSB 12	0.5 over 45m
	KSB 13	1.1 over 10m
Line 55100	KSC 15	0.8 over 5m
	KSC 17	2.2 over 10m
		and 0.6 over 5m
	KSC 22	0.5 over 5m
	KSC 23	4.5 over 5m
	KSC 24	2.4 over 5m
Line 54900	KSC 28	1.2 over 10m
	KSC 29	1.1 over 10m
		and 1.4 over 5m
Line 54500	KSC 53	0.7 over 15m
	KSC 54	0.8 over 5m
Line 54100	KSC 58	4.5 over 5m
	KSC 59	9.7 over 5m
	KSC 61	0.6 over 30m
	KSC 67	0.4 over 10m
Line 52500	KSC 70	0.6 over 35m
	KSC 73	2.3 over 5m
	KSC 74	0.4 over 10m
	KSC 75	0.4 over 10m

Little free gold was recovered in the pan whilst drilling, partly a function of the amount of sulphide material preserved and partly due to the apparent fineness of the free gold with only rare occurrences of gold in excess of 0.2mm. Grade variability has been observed where coarser gold was seen in the pan. Although an occasional sample's assay grade failed to equate to gold seen in the pan, these results do not change the overall interpretation.

Mineralisation intercepted in the drilling correlates well with the surface soil anomalies, with the anomalous "eyes" typically being underlain by the higher-grade mineralisation. However, the presence of sulphides, carbonates, silicification and well developed quartz veins do not ubiquitously correlate directly with gold mineralisation.



Kofi Licence - Mali
Kofi South Prospect
Section Line 1454100 N - Eastern Side
N 090
Scale 1:1000
KSC 61
KSC 60
KSC 59
KSC 58
KSC 57
15m @ 0.25 g/t Au
0.34 g/t Au
0.22 g/t Au
2.51 g/t Au
0.23 g/t Au
0.20 g/t Au
9.70 g/t Au
15m @ 3.39 g/t Au
0.24 g/t Au
0.20 g/t Au
0.47 g/t Au
10m @ 0.36 g/t Au
10m @ 2.39 g/t Au
4.49 g/t Au
0.29 g/t Au
Legend
Soil
Ferricrete
Phyllite
Black quartzite
Weathering front
Quartz vein / stockwork
Mineralisation Length / Gold grade
Drill hole

6.3.3.6 Kofi South-South-A

Geology and Soil Geochemistry

Kofi South-South, zone A comprises a 6 square kilometre area underlain predominantly by NNE (020-030 degrees) striking phyllites and greywackes, with intercalated quartz tourmaline sandstones across the western part of the area. The area is centrally cross cut by a major NNE trending structure intruded by a dolerite dyke (as shown on airborne magnetics).

Kofi South-South is characterised by a number of substantial gold in soil anomalies at the 50 ppb threshold which are typically aligned parallel to the regional NNE structure and lithological strike.

Anomaly 1 (N1442750/E25250 to N1445100 / E 252950)

At the 50 ppb threshold the gold in soil anomaly is aligned NNE for at least 2000m, with a width generally ranging from 200-400m. The central 900m of the anomaly yields consistently high values greater than 200 ppb (to a maximum of 2805 ppb) and lies across residual soils with abundant dolerite and quartz fragments often aligned in low ridges. To the north the anomaly runs onto a ferricrete plateau where soil values are more variable to a maximum of 1481 ppb. To the south the anomaly is again more variable across a drainage plain and accumulation surface, although values up to 14,100 ppb continue to be recorded.

Anomaly 2

At the 50 ppb threshold the gold in soil anomaly is aligned NNE for a distance of 2100m, with a width generally ranging from 200-300m. The northern 600m of the anomaly is underlain by extensive areas and hillocks of quartz fragments with gold values often above 200 ppb to a maximum of 1792 ppb. The central and southern end of the anomaly is underlain mainly by a depositional – low plateau morphological environment where gold values are more variable to a maximum of 2614 ppb. There is very little evidence of surface rock fragments other than quartz, with the few rock fragments seen suggesting a phyllite – greywacke sequence.

Anomaly 3

At the 50 ppb threshold the gold in soil anomaly is aligned NNE for a distance of 700m with a width generally ranging from 200-300m. The southern third of the anomaly is underlain by a ferricrete plateau with values to 792ppb whereas the remainder lies across a low (erosional) plateau with quartz hillocks, rare artisanal sites and evidence for a phyllite-greywacke sequence. In this domain gold values are commonly greater than 200 ppb and rise to 2044ppb.

It is possible that anomaly 3 represents a continuation of anomaly 2 along an underlying NNE striking structure separated by an apparently unmineralised zone of about 300m.

Anomaly 4

At the 50 ppb level the anomaly is aligned NNE and lies across a heavily dissected low (erosional) plateau, with the depositional environment of narrow (50-300m) drainage channels in part masking the anomaly. The anomaly is interpreted to extend for some 1100m with a width mainly between 100-200m rising to a maximum value of 787 ppb. Quartz fragments and evidence of veining are preserved within a predominantly phyllitic-greywacke sequence. The quartz may be white or grey, locally with boxworks, vugs and brecciation. Surface grab samples of quartz gave grades ranging from 1-14 g/t Au.

Anomaly 5

The anomaly is not clearly bounded, being represented by two zones of spotty high gold values with a NNE alignment, of 600m and 500m length respectively. The values commonly range from 500-900ppb with four values between 1089-7947 ppb, which are dispersed over widths of 300-400m. The anomaly lies predominantly across a ferricrete plateau with very occasional outcrop and fragments of granite indicating the local presence of a granitic intrusion. In addition the anomaly lies at the triple intersection of three significant structures, N-S, NNE and NW.

Drilling Kofi South-South-A

The Kofi South-South prospect was drilled on a reconnaissance basis during the 2000 field season by AMCO International. A total of 30 holes were drilled for a total of 1855m. The reconnaissance programme was completed in parallel with the geomorphological / geological mapping campaign with drill fences not always optimised for the anomaly.

Anomaly 1

Three RC fences were located approximately 500m apart across the anomaly; fence 1443900 tested the central part of the anomaly to a vertical depth of 40m although poor access prevented completion of a full, overlapping fence. A sill like dolerite feature was intersected within a greywacke-siltstone-phyllite sequence. Only anomalous mineralisation (0.7g/t over 5m) was identified. The fence 500m south also intersected the dolerite sill with anomalous mineralisation adjacent to, and within the sill (KSSC 10B, 0.4g/t over 15m and KSSC 10A 4.8 g/t over 1.5m ending in mineralisation). The third and most southerly fence of two holes was drilled off structure.

Anomaly 2

A single fence line was drilled central to the anomaly, but again the axis of the structure was not tested due to poor access. A biotite granite was intersected in the hanging wall (west of the anomaly), and greywacke-siltstone sequence in the footwall. Mineralisation of 0.5 g/t over 20m was intersected in the footwall zone, in the siltstones.

Anomaly 3

A single fence of two holes was drilled at the southern end of the anomaly, failing to fully cross the structure. An intersection of 2 g/t over 5m was made in a greywacke-siltstone sequence.

Anomaly 4

A single fence of 3 holes was drilled at the southern end of the anomaly in the region of surface quartz samples that gave a grade of 14 g/t Au. An intersection of 7.1 g/t over 5m was made at the contact between the greywacke-siltstone sequence and a biotite granite “dyke”. A similar relationship with an acidic intrusive is noted at both the nearby Tabakoto and Segala gold deposits.

Anomaly 5

The anomaly is untested by drilling.

6.3.3.7 Kofi North-East

Geology and Soil Geochemistry

Zone A An area of 2 square kilometres located between UTM 1462800-1464800 N and 250000-250900 E, with soil sampling completed on a 100 x 50m grid for a total of 399 soil samples collected.

The sampling defined a NNE aligned gold in soil anomaly, which at a threshold of 50ppb has a strike length of 1,300 metres and a width of 200 to 300 metres. Patchy anomalous zones at both the northern and southern ends of the main anomaly lie along the same structure and may represent an extension of the mineralised zones masked by a depositional environment. If included, the anomaly would increase in size to a length of 2000m. The anomaly lies along a major NNE shear recognised from airborne geophysics and satellite imagery where it curves into a prominent N-S structure. Dolerite dykes are seen to follow both structures, and form the eastern boundary to the anomaly. This was confirmed by a ground geophysics survey carried out in the area.

Very occasional outcrop exposure indicates that the area is underlain by a sequence of greywackes, black quartzites and phyllites with some linear hillocks of quartz.

Zone B The area covers 3.5 km by 4.4 km immediately to the west and south of Zone A, with soil sampling completed on lines spaced at 200m with samples collected at 100m intervals. The area contains two significant anomalies that lie on NNE structures, with a number of smaller anomalies. The underlying lithologies are similar to Zone A, comprising a sequence of quartzites, greywackes and phyllites with cross cutting dolerite dykes.

Anomaly 1 (N146300-N1465400; E247800-E249000)

The anomaly at the 50ppb threshold has a strike length of 2,500m aligned NNE, with a N-S component at the southern end. The results are more spotty to the NNE due, it is believed, to an increase in masking by a depositional environment. The width varies from 500m in the south to 200-300m in the north. Spot values rise to 3196ppb.

Anomaly 2 (N1461000-N1462200; E249500-E250000)

At the 50 ppb threshold the anomaly is aligned NNE with a strike length of 1000m and width typically between 200-300m. The anomaly appears to lie along the same structure as underlies the anomaly in Zone A.

6.3.3.8 Kofi South-East

Kofi South East comprises an area of approximately 6.2 x 3.6kms, of which Zone A was subject to soil geochemistry with samples collected on a 100 x 50m grid. The remainder of the area has been covered by reconnaissance sampling on a grid 400 x 100m.

Geology and Soil Geochemistry, Zone A

Two subparallel anomalies, some 100-200m apart have been located between UTM co-ordinates N1456600-1459500 and E251000-253500. The anomalies lie along an extension of the N-S structure that underlies Kofi South (located approximately 500m to the south). The infilled area covers 3.17 square kilometres. Twenty-four kms of additional lines were cut and 577 soil samples collected in order to complete the infill grid.

The infilled area covers 3.17 square km. 24.3 km of additional lines were cut and 577 soil samples collected in order to complete the infill grid.

From the few rock fragments seen, the underlying sequence is interpreted to be black quartzite and phyllite dominating rare red quartzitic sandstone and grey quartzite. The phyllites are sometimes silicified with veinlets (? joints) filled with quartz and Fe oxide-hydroxide. The black quartzite has white quartz veinlets, which sometime look like low-density stockworks, and occasionally a few fresh disseminated pyrite and/or marcasite. The red sandstone seems partially ferruginised (highly oxidised) and might represent the continuity of the red sandstone alignment observed in Kofi South Prospect.

Anomaly 1

The most intense anomaly, which lies on a NNE to N-S alignment occurs over a strike length of 1,200m at a threshold value of 100 ppb with many values lying in the range 200-800ppb, and eyes to 5421 ppb. The probable extension of this, as defined by spotty anomalies passes into a broad alluvial area heavily worked by artisanal miners. By including the extension across the alluvial area, the anomaly may be up to 2,500m in length. Width is typically in the order of 200-

300m
Anomaly 2

The anomaly lies immediately to the east of anomaly 1, and shows less continuity. At the 50 ppb threshold, it extends N-S for 1,000m with values up to 8,260ppb gold.

Kofi South East – Regional - Geology and Soil Geochemistry

Although covered only at the reconnaissance scale comprising a grid of 400 x 100m., two broad anomalies have been identified in the western part of the area both lying along the same NNE structural corridor that extends north, and controls the anomalies in the Kofi North East area.

Both anomalies extend for about 800m with widths of 200-400m, with values (in particular in the southern anomaly) ranging from 200-500ppb, with spot values to 1505ppb.

6.4 SATIFARA PROJECT AREA

6.4.1 History of Satifara Project and Surrounding Area

Up to the end of 1993, the history of the Satifara project and surrounding area is the same as that described in Section 6.3.1 for the Kofi project area.

The work by African Goldfields located a 5km long gold in soil geochemical anomaly that is 1.5km wide in its northern part and 0.25 km wide in its southern part. The anomaly strikes 310° (see Figure 6.7). Over the anomalous areas an infill (200 x 100m grid) geochemical survey was completed. Trenching was reported in the vicinity of the soil geochemical anomaly.

Semos (Anmercosa – IAMgold) Company completed a drilling program near the southeastern boundary of the Satifara licence in 2000. Their drill line disposition suggests that they tested a NW – SE trending structure. The extension of this area in the Satifara licence is represented by the gold soil anomaly on the southeastern side of the Satifara licence (see Figure 6-8).

6.4.2 Exploration Work by AXMIN (2000)

AXMIN carried out a brief, preliminary program in the area at the end of the last field season (June 2000). The exploration work consisted of geological reconnaissance and hand trenching in the vicinity of the geochemical anomaly outlined by African Goldfields. Difficulty was encountered in identifying the soil geochemical grid. It became obvious that the second grid established for the in-fill soil geochemical program had a different set of easting co-ordinates than the original grid. The base line was re-cut two times at different Eastern coordinates (100m difference for each base line) and the soil assay database has a different set of local co-ordinates.

The AXMIN geologist that completed the preliminary program concluded that the previous work probably outlined a geochemical anomaly, however, the location of the anomaly needs to be re-established prior to undertaking drilling or trenching.

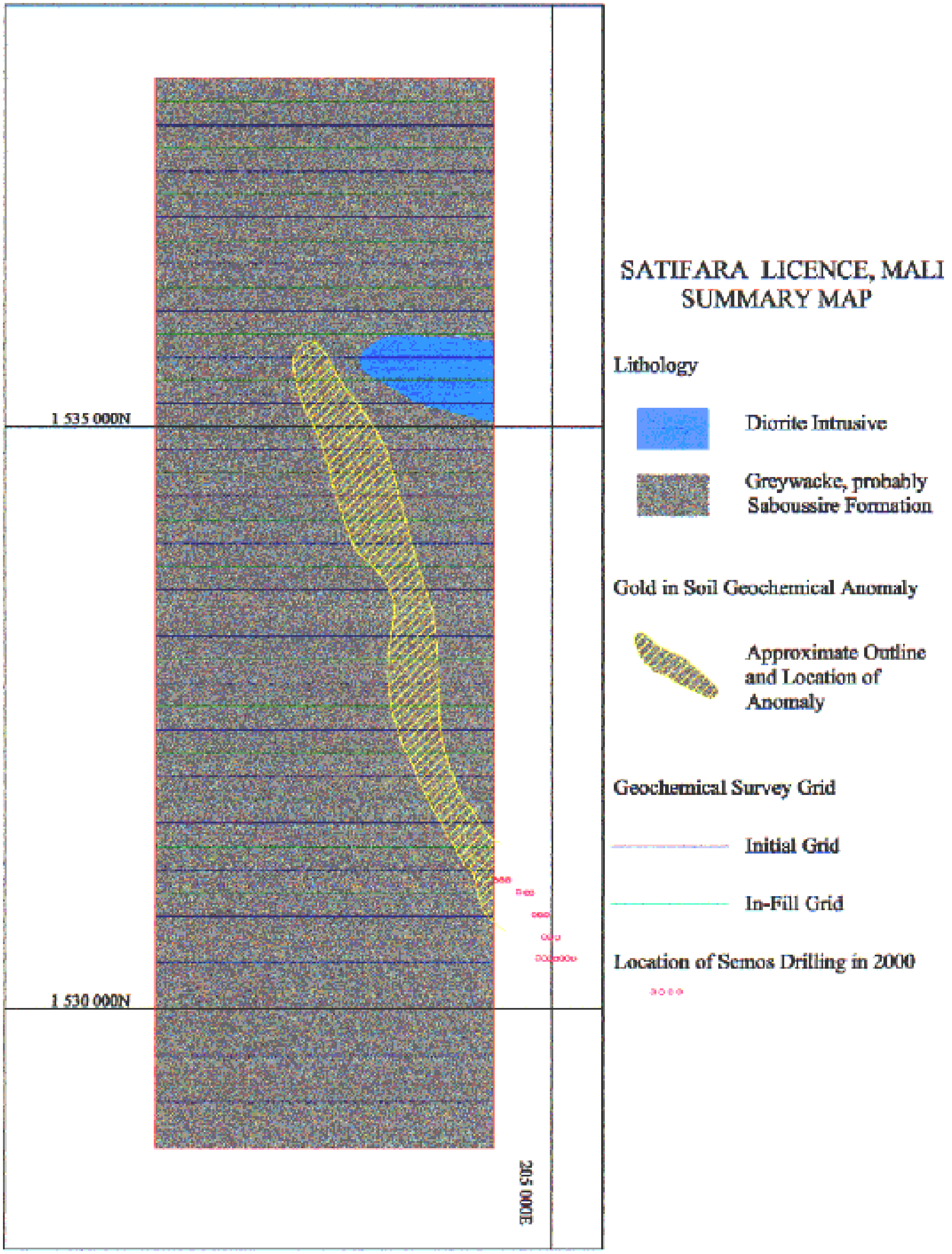


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FIGURE 6-7

6.4.3 Mineralisation and Exploration Targets

6.4.3.1 Overview

The geological reconnaissance programme focused on mapping of the gold soil anomaly in the Satifara Licence in conjunction with a limited trenching program to supplement the work conducted by African Goldfields.

6.4.3.2. Trenching and channel sampling

The area trenched initially by African Goldfields and followed up by AXMIN is located in the northern part of the soil gold anomaly. The trenches are aligned E - W on the western slope of a hill, terminating against the thick ferricrete cap developed on the hill.

The trenches intersected the following lithologies:

- Trench 5 0m to 401m - diorite.
  401m to 465m - greywacke.
- Trench 12 0m to 50m - diorite.
- Trench 11 0m to 25m - diorite.
  25m to 50m - greywacke.
- Trench 13 0m to 15m - diorite.
  15m to 50m - greywacke.

In all the trenches, the presence of muscovite, chlorite, and recrystallised quartz within the contact zone between the diorite and the greywacke suggest contact metamorphism. All the rocks intersected in trenches are strongly weathered.

Gold mineralisation was intersected in Trench 5, with 34m @ 3.44 g/t Au. The mineralisation strikes 030-050 degrees and is hosted by greywacke at 25m from the contact with diorite. Only anomalous gold was intersected in the other trenches.

AXMIN completed three new trenches (14 to 16) in the vicinity of Trench 5. Trenches 14 and 15 investigated the potential strike extent of the mineralisation seen in Trench 5. Trench 16 was set to test a possible NNW extension of the mineralisation.

Trench no. 14 intersected the following lithologies:

0m to 20.30m - weathered diorite (strike N45°- 50°, dip 50°– 80° SE).
20.30m to 40m - weathered greywacke, thin joints with quartz and iron ox.-hydroxides (strike N10°-N50°, dip 45°- 85° NW).

Trench no. 15 intersected the following lithologies:

0m to 16.50m - weathered diorite.
16.50m to 30m - weathered greywacke.

Trench no 16 intersected the following lithology:

0m to 29.25m weathered diorite.

The trenches were channel sampled (with two metre samples with 10 cm x 5 cm profile).

6.4.3.3. Assay Results

The samples were assayed for Au at the Abilab Laboratories in Bamako, Republic of Mali, using AA with 5 ppb detection limit.

The assay results from Trench 14 do not confirm the mineralised intersection from Trench No. 5. The new results range between 0.03 g/t and 0.25 g/t. There could be a possible correlation between the frequency of the quartz veinlets and gold grade in the greywacke formation. In addition, Trench 14 was set at a lower elevation to Trench 5, perhaps testing the area beneath a possible surficial gold enrichment zone.

No gold mineralisation was seen in Trench 15 while Trench 16 gave 8m @ 0.41 g/t and 2m @ 0.78 g/t, both mineralised zones hosted in the diorite. It is interesting to note that the diorite does not show any internal structure that could account for the mineralisation.

6.5 SAMPLING METHODS AND APPROACH

AXMIN field personnel have established a well documented and thorough sampling methodology for their exploration program. Howe visited the project area in March 2001 and concludes that the field work completed by AXMIN has been carried out in a professional manner by a team of local geologists and technicians overseen by experienced foreign staff who have worked for several years in the area. The work appears to be well organised and they have the computer facilities to produce reports, prepare maps and sections, etc., which they keep up to date. Their reports are informative and well illustrated.

The various procedures followed in reverse circulation and rotary air blast drilling are quite standard and the AXMIN exploration group appears to be quite meticulous in maintaining good work standards. Given the extensive sampling (soil and drilling samples) over the past several years, Howe was impressed with the storage and organisation of samples.

The following write-up of the sampling procedures is taken directly from AXMIN's project summary report for 2000.

6.5.1 Rig Site Sampling and Splitting Methodology

At each drill site an area for sample splitting, chip logging and sample panning was established.

RC and RAB samples were collected over one-metre intervals in a numbered 50 kg plastic bag, which was held underneath the cyclone by a sampler. In normal conditions of recovery, each metre of sample weighs between 15 and 25 kg, depending on the sample humidity. However, when poor recovery was recorded, samples could weigh as little as 5 kg.

The procedure that was used for splitting the sample at the rig site is summarised below:

- The entire 1m sample is emptied into a Gilson Sample Splitter (model SP 1). Each metre is homogenised by three passes through the splitter. The fourth time the sample is split until it is reduced to about 2 kg for each metre. The 2 kg sample is emptied into a numbered and labelled plastic bag and then transported to the Kéniéba camp. The remainder of the split sample is re-bagged in the original large plastic bag; this is used for chip logging and panning at the drill site. The splitter is cleaned with air from the compressor after each operation.
- From each large sample bag, two handfuls of material are emptied into a large calabash; this operation is repeated for 5 samples, to give 5m composites (the same as the samples sent for analysis). Then the material is homogenised in the calabash and panned to produce a heavy mineral concentrate. The gold particles are counted.

  One handful of material from each large sample bag is sieved through a 1mm sieve and is used for chip logging at the drill site. The geologist in charge selects the significant chips, which are then stored as 5m composites in chip boxes. The big sample bags are transported and stored in the Kéniéba camp.

6.5.2 Second Stage Sample Preparation

The second stage sample preparation comprises the homogenisation/splitting of the 2 kg samples from the rig site, which was done in the Kéniéba camp, prior to laboratory analysis.

For both of the drilling programs, analysis was carried out on 5m composite samples. The assay results turn around time varied between 24 hours to 7 days; therefore 1m checks were only taken over the sections that showed interesting assay results in the 5m composite samples. The preparation process took place in a brick-built storage room from the Kéniéba camp, under permanent supervision by an AXMIN geologist. The homogenization and splitting methodology for the 2 kg samples is presented below.

- The 2 kg, 1m samples for each hole are arranged in consecutive number order.
- Each 5 consecutive samples are emptied in a Gilson Porta Splitter (model SP 2) and passed 4 times through the splitter for homogenisation. The fifth time, the homogenised sample is split down to 1 kg, and bagged in a Kraft paper geochemical sample bag, representing the 5m composite sample for analysis. The sample is kept in the locked Kéniéba camp storage room until being sent to the laboratory. The homogenised 5m composite reject is kept in the same storage facility.
- 1m checks for the high-grade 5m composites are taken from the original large sample bag (the rig cyclone sample bag). The same procedure is followed for homogenisation and splitting as above, with the exception that it is only made for 1m samples.

6.6 SAMPLE PREPARATION AND SECURITY

All samples sent for analysis were packed in cardboard boxes. During the Year 1 program, the samples were picked up by SGS Sofilab representatives at the Kéniéba camp and pulverised in the SGS facility in Kéniéba. During the Year 2 program, samples were sent to Abilab Bamako either with AXMIN vehicles or with Abilab vehicles that were accompanied by an AXMIN representative.

In Year 1, the 5m composite samples (4 batches) were taken from the Kéniéba camp by SGS Sofilab Bamako representatives and pulverised (using a ring mill) in the Kéniéba SGS facility. SGS shipped the pulverised samples to their central laboratory in Bamako. A total of 957, 5m composite samples were analysed for gold using the 50 g Fire Assay method.

Seven batches of 5m composite samples (915 samples) were sent during the Year II program to the Abilab Laboratories, Bamako for 50 g Fire Assay analysis. 36 supplementary 5m composite samples from the Year I program and 14, 5m composite samples (Year II program) had shown discrepancies between the repeat assays and were re-analysed in Abilab using the homogenisation and splitting techniques described above.

The 5m composite samples that returned interesting grades were re-analysed as 1m splits, in Abilab (68 samples). The 1m splits were taken from the original large bags (cyclone bags, comprising 1m sample), homogenised and split.

123 (12.85 % of the total samples) check samples were shipped to the OMAC Laboratories in Ireland, for the first year program. The check samples were split and homogenised (using the methodology described above) from the original large bags (cyclone bags, comprising 1m sample). The 5m check samples were analysed using the OMAC 50 g Fire Assay method and repeat assayed using the 50 g Wet Assay method. Table 19 shows the SGS assay results versus the OMAC check assays.

Another 90, 5m composite check samples were shipped to OMAC and were analysed for gold using the 30 g Fire Assay method and the 30 g Wet Assay method for the repeat samples. This gives a total of 104, 5m composite check assays (11.37 % of the total) for the second year program.

All the drilling data derived from the Drill Log Sheets, which were completed at the drill sites. The Drill Log Sheets have been summarized and an Excel format database established. The surveyed drill hole location and geology/assay data has been organised in a Surfer format to allow the plotting of maps and cross sections.

6.7 DATA CORROBORATION

Howe has reviewed in detail the tabulation of assay data for the Kofi project. Check assays for the Year 1 program indicated that the SGS results had missed some significant gold values. As a result in Year 2, AXMIN switched to Abilab as their primary assayer. Subsequent check assay work carried out on the Abilab assay data indicated a better quality of data than the Year 1 results.

Howe reviewed all of the assay data in detail and would conclude that any major differences in original assay versus duplicate and check assays is probably the result of the well known "nugget effect" which is a typical problem when assaying samples containing significant quantities of coarse, free gold.

Howe would conclude that sufficient duplicate and check assays have been carried out to identify any serious analytical problems.

For the most part no material variations were noted between the original assays and the duplicate assays (approximately every 10th sample run at the time of the original assay), check assays of samples sent back to the original assay lab, and check assays of samples sent to an independent lab. Some high-grade assays displayed a high range of assay values on a review of duplicate, and check assays, which is probably due to nugget effect.

During Howe's site visit, 5 trench, 1 outcrop and 6 reverse circulation drill hole samples (5 metre composites) were taken as an independent, spot-check of the AXMIN data. The results are presented below:

Sample Type	**Original Assay (g/t)**	**Howe Assay**	**Howe Comments**
1) Trench	1.3/18m	9.05/1m	Sample taken in central part of Randgold trench #17 in the obvious silicification and quartz veining.
2) Trench	1.35/3m	0.46&0.57/3m	Kofi SW-A trench, no apparent silicification.
3) Trench	2.2/4m	2.29, 1.56 1.28&1.65/4m	Kofi SW-A minor silicification or quartz veining
4)Trench	1.5/5m	1.99&1.44/5m	Kofi S-S, Trench 10, chip samples of narrow veins and silicification in same wall as original 5m sample
5) Trench	1.5/5m	0.32&0.48/4m	Kofi S-S, Trench 10, on opposite wall to original 1.5g/5m sample

6) Outcrop	***101/2m***	***0.02&0.03/2m***	***Kofi S-S 2m quartz vein in outcrop (AXMIN** #75701)*
7) RC drill	4.56/5m	5.38&4.68/5m	KWBC11(Kofi SW) 15 to 20m
8) RC drill	3.72/5m	5.13&4.09/5m	KWBC11 (Kofi SW) 20 to 25m
9) RC drill	7.36/5m	6.57&8.75/5m	KWBC12 (Kofi SW) 75-80m
10) RC drill	6.52/5m	6.31&7.55/5m	KWBC12 (Kofi SW) 80-85m
11) RC drill	5.8&26.6/5m	29.01&49.1/5m	KSC59 (Kofi S) 5 to 10m
12) RC drill	***4.49&0.11/5m***	***0.28&0.30/5m***	***KSC58 (Kofi S) 10 to 15m***

Only Howe samples 6 and 12 above appear to be significantly at variance with the AXMIN assay data. In Howe's opinion the quartz vein in outcrop at Sample 6 looks barren and the Howe sample confirms this opinion. Howe suspects an assay lab problem with this sample. With regard to Sample 12, in AXMIN's assays, the 4.49g/t is the original assay by Abilab and the 0.11g/t is an OMAC check assay. Howe's sample seems to confirm the OMAC check assay, however, the discrepancy could be a "nugget effect" problem.

Howe is satisfied that the assay data base for the Kofi project is basically sound and sufficient to guide an exploration program. Clearly there is an assay problem relating to the presence of coarse free gold in the gold bearing zones. This is not a problem unique to this project but is common in the evaluation of any such mineralised zone containing coarse, free gold.

Part of the sample logging process (see Section 6.5.1) involves panning a grab sample and counting the visible gold grains. This data could be used as a guideline to assist in minimizing the nugget effect in assaying (see Conclusions and recommendations below).

6.8 INTERPRETATIONS, CONCLUSIONS, AND RECOMMENDATIONS

6.8.1 Regional Geological Setting

The Birimian-type greenstone belts of the West African Craton are well established as having excellent potential for the discovery of significant gold deposits.

The Kofi and Satifara projects are located in an area of western Mali where major gold mines have been brought into production in recent years, as well as the discovery of several multi-million ounce deposits, which are approaching feasibility study.

6.8.2 Conclusions

During the period October 1998 - July 2000, AXMIN Limited performed exploration activities comprising:

- Regional (400m x 100m) and detailed (200m x 50m and 100m x 50m) soil sampling, covering all the Kofi licence (198 km^2) for a total of 13,026 soil samples;
- detailed geological / geomorphological mapping at a scale of 1:5,000 – over 75.46 km^2 with the collection of 316 rock chip samples;
- RAB and RC drilling – 186 drill holes and 11,362.5 drilled metres.

Based on the integration of the field observations, soil anomalies, drilling results, satellite image and geophysical interpretation, AXMIN's geologists have proposed the following model for the Kofi area:

- The regional strike of lithologies is NNE, swinging to N-S in the central part of the licence, with bedding apparently dipping steeply to the west. The following lithologies were identified.
- A dominantly-greywacke formation that has phyllite and few quartzite intercalations. This represents the most common lithology and is developed in the central, eastern and southern areas of the Kofi licence.
- A black quartzite unit with intercalations of phyllite occurs in the central-eastern part of the licence. The quartzite forms two parallel bands, trending N-S, in Kofi South prospect (100 to 250m thick) and one long band, trending NNE that traverses Kofi Southeast and Northeast (500-600m thick).
- A quartzite formation with greywacke intercalations occurs in Kofi Southwest and Northwest and in the Kofi South-South prospect. This unit strikes N-S, NW or NE and is 100m to 1 km thick. Quartz-tourmaline sandstone lens-shaped units occur within the quartzite ± greywacke formation as well-individualised ellipsoidal bodies 10 to 300m thick.
- A phyllite formation with thin greywacke intercalations is found in the Western part of the licence.
- The formations are intruded by EW and NE-trending basic dykes (dolerite and gabbro) and by post-tectonic granites (Kofi South-South Prospect).

The most important structures in the Kofi licence can be observed on satellite images and on airborne geophysical maps. Some of these structures were also identified in the field. Exploration has revealed that the Kofi area is intensively tectonised: by at least three major NNE, swinging to N-S trending shear zones and several NW and NE fault systems cross the area. In places these shears have subsequently been intruded by basic dykes. The shear zone corridors have had a significant control on the distribution of the gold in soil anomalies.

The first shear zone is located in the west of the Kofi licence and crosses the Kofi Southwest and Northwest prospects. The shear has a general NNE-trend in the south, and changes to a N-S strike in the north. The shear develops along the contact between the greywacke (to the east) and the quartzite formations (including the quartz-tourmaline units) - to the west.

The second shear zone crosses Kofi North East, and swings N-S as it approached the northern border of the licence. The third shear crosses Kofi South-South. A linking N-S structure was identified in the Kofi South prospect and seems to be continuous for at least 10 km in a N-S direction. The shear also develops at the contact between greywackes (to the east) and black quartzites (to the west).

The NE and E-W trending structures were identified on the airborne geophysics and satellite images. According to the geophysics, they represent basic dykes and/or faults.

The NW faults are the latest tectonic events, offsetting the N-S shears and the NE faults/dykes.

The gold mineralisation identified in the Kofi licence relates to three different geological settings:

- Contact between quartz-tourmaline sandstones and quartzites – the gold mineralisation develops in quartz stockworks on NE or NW openings, occurring on or near the contact between the two formations along NNW or N-S shears. This is found in Kofi Southwest zones A, B and C.
- N-S shear zone / fold nose along the contact between greywackes/phyllites and black quartzites. The gold mineralisation develops in quartz-sulphide stockworks along the shear and in the fold hinge. This type of mineralisation was identified in the Kofi South prospect.
- Quartz veins around a post-tectonic granite – typical for Kofi South-South prospect.

Howe would conclude that, detailed exploration having been carried out over only the most obvious gold in soil geochemical targets in three out of six main prospect areas, additional exploration is warranted to further assess the potential to discover a significant gold resource within the Kofi Project area.

Areas where anomalous gold has been indicated by wide-spaced drill sections (200 to 400 metres apart) should be infilled on 100 metre sections in an attempt to establish better evidence for the continuity of individual zones.

In the Satifara Project area, sufficient, very preliminary work was completed to determine that major problems existed with previous grids established in the area. The AXMIN geologists concluded that the project warranted additional exploration, however, the general area of the known gold geochemical anomaly will require a new grid and additional soil geochemical sampling to re-establish the location of the anomaly.

6.8.3 Recommendations

6.8.3.1 Kofi Project

AXMIN's corporate objective for this program is to identify a significant gold resource that may either be developed as a stand alone project or be incorporated into a gold development project involving one or more of the other discoveries in the region. The next phase of exploration work in the licence should focus both on the follow-up of earlier drilling programs where gold discoveries were made and on identifying new mineralised zones through trenching and drilling of the large number of untested gold in soil anomalies.

Follow-up drilling should focus on the following target areas:

- **Kofi SW – A**: In-fill drilling to further evaluate the primary gold anomaly. Approximately 3 x 160-metre sections for 15 holes totalling 900 metres will be required.
- **Kofi SW – B**: In-fill drilling to further evaluate the primary gold anomaly, which is on trend from Randgold's Baboto North gold anomaly. Approximately 4 x 80 metre sections for 20 holes totalling 1600 metres will be required.
- **Kofi SW – C**: In-fill drilling to further evaluate the primary gold anomaly. Approximately 4 x 160-metre sections for 20 holes totalling 1200 metres will be required.
- **Kofi S – A**: In-fill drilling to further evaluate the two gold anomalies. Approximately 4 x 80-metre sections for 16 holes totalling 960 metres will be required.

In addition a minimum 6,000m RAB drilling program is justified across a number of the gold in soil anomalies defined by the systematic licence-wide sampling. Prioritisation of the anomalies will be necessary before the program commences.

6.8.3.2 Satifara Project

The following exploration program is recommended for the Satifara Project area:

- 5 sq. km soil sampling (100 x 50m grid) over the main anomaly;
- 5 sq. km geological mapping in the same area; and
- 1500m reconnaissance RAB drilling.

6.8.3.3 Proposed Budget

Details of the 18-month budget are as follows:

		Canadian $
Fixed Holding Costs		
Licence Fees	$ 80,000	
Local Administration Costs	$ 110,000	**$ 190,000**
RAB/RC Drilling and Support Costs		
4660m RC drilling @ $62/m	$ 289,000	
7500m RAB drilling @ $ 40/m	$ 300,000	
Assays (2600 @ $38)	$ 100,000	**$ 689,000**
Geochemical Survey Assays		
Assays (500 @ $38)	$ 19,000	**$ 19,000**
Salaries and Travel Costs		
6 months @ 36,835/mo.	$ 221,000	
12 months @ $3,000/mo	$ 36,000	**$ 257,000**
SUBTOTAL		**$ 1,155,000**
CONTINGENCY		**$ 116,000**
TOTAL		**$ 1,271,000**

7.0 SENEGAL

The Sonkounkou gold project of AXMIN is located in eastern Senegal on the Mali-Senegal border. The project is located about 22 km northeast of the Sabodala deposit. AXMIN's Kofi project is approximately 65 km to the east in Mali. The Sabodala deposit (Societe Minière de Sabodala and BRGM, resource 2.6 million tonnes grading 5 g?/t Au or 13 tonnes of gold plus an additional 17 tonnes of gold in the geological resource category) is not in production, however, the government is seeking a strategic partner for its development (Direction des Mines et de la Géologie website).

7.1 GEOLOGICAL SETTING

Senegal is located in the West-African Craton which comprises Archean and Lower Proterozoic terranes (stabilized 1.5 to 1.6 Ga ago). The West Africa Craton underlies much of Ghana, Burkina Faso, Ivory Coast, Liberia, Sierra Leone, and parts of Guinea, Senegal and Mali. These terranes are partially covered by undeformed, Upper Proterozoic to recent formations.

The West African craton outcrops in southeastern Senegal along the Mali-Senegal border in the area known as the Kédougou-Kéniéba Inlier.

The Sonkounkou project is located within the Kédougou-Kéniéba Inlier, an area underlain by supracrustal and plutonic rocks of the Lower Proterozoic.

7.1.1 Regional Geology (See Figure 7.1)

Three volcano-sedimentary formations have been identified within the Kédougou-Kéniéba Inlier (see Figure 7-1):

- Mako Supergroup (Saboussiré formation in Mali);
- Daléma Supergroup (Kofi formation in Mali); and
- Dialé Supergroup (Kéniébandi formation in Mali).

The Mako Supergroup is located in the Western part of the Kédougou-Kéniéba Inlier and is composed of a thick pile of volcanic, volcano-plutonic and sedimentary rocks. The formation is subdivided into three lithologic units:

- A basic igneous unit, composed of discontinuous thick intercalations within the volcanic sequences;
- A volcanic rock unit, of intermediate to basic composition (subdivided into a lava flow facies and a pyroclastic facies); and
- A heterogeneous metasedimentary unit that is transitional with lava flow and pyroclastic facies.

The Daléma Supergroup is located in the Eastern and Southeastern side of the region (along the Tambaoura escarpment) and is comprised of metasediments (sandstones and shales). These rocks form thick successions with sub vertical foliation, whose regional strike direction ranges from NNE in the southern part of the area to NNW in the north.

Table 7.1
Table of Formations
Senegal

PHANEROZOIC

POST PROTEROZOIC TO CENOZOIC
Residual soils, hardpan, sand
Sandstone
UNCONFORMITY

PRECAMBRIAN

PROTEROZOIC
UPPER PROTEROZOIC
UNNAMED FORMATION
Post Orogenic Sandstone
UNCONFORMITY

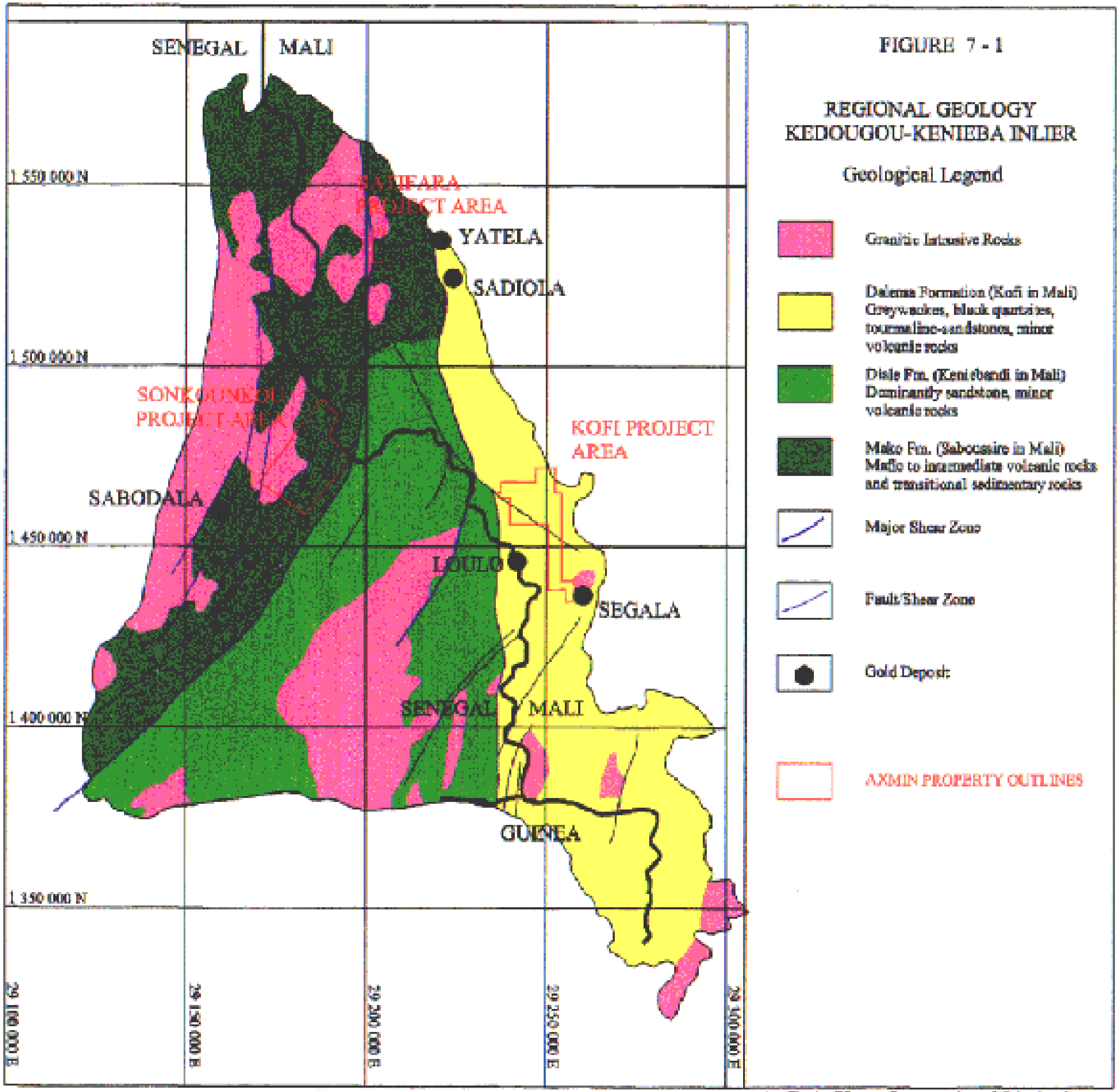
LATE DYKES
Diorite-Gabbro
INTRUSIVE CONTACT

POSTTECTONIC FELSIC INTRUSIVES
Granite-granodiorite batholiths
INTRUSIVE CONTACT

SYNTECTONIC FELSIC TO INTERMEDIATE INTRUSIVES
Foliated, elongate granodiorite-diorite batholiths
INTRUSIVE CONTACT

LOWER PROTEROZOIC (Birimian)
DIALE SUPERGROUP
Thick succession of metasandstones with flat to moderate dips.
DALEMA SUPERGROUP
Dominantly metagraywacke, sandstones and schists with intercalated black quartzites. Tourmaline cemented sandstones on west side of unit along with minor volcanics and marbles.
MAKO SUPERGROUP
Dominantly mafic to intermediate volcanic flows and pyroclastics with associated metasedimentary rocks

ARCHEAN



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- The sedimentary sequences within the Eastern side are composed of alternating metasediments: sandstones/greywackes (sometimes with a carbonate cement) and schists. Intercalations of black quartzite occur locally.
- The Western side is distinguished by the occurrence of sandstone layers with tourmaline cement. These hard and massive rocks form prominent hills. The rocks include a large variety of facies: coarse (microconglomeratic) sandstone, medium to fine sandstone (greenish-grey colour and massive texture) and jasper-like sandstone (deep grey colour).
- Towards the Western side, volcanic sequences occur locally: lava flows and pyroclastic rocks of intermediate to acid composition are quite rare and strongly weathered.

The Dialé Supergroup crops out in the central part of the region. Major shear zones form the Western and Eastern boundaries of this formation.

The Dialé Supergroup is represented by thick successions of metasediments (mainly sandstones) with a sub horizontal to moderately inclined dip. The metasediments are comprised of the following: medium to coarse greywacke with carbonate cement (often microconglomerates), representing the major part of the formation; polymictic conglomerate (forming elongated lenses) interbedded within the greywacke; and metavolcanic rocks (lava flows, breccias and tuffs) of basic to intermediate composition. These form discontinuous intercalations but have considerable extension.

Intrusive Rocks Several intrusive types of variable form, dimension and composition occur in the Kédougou-Kéniéba Inlier. Four type of intrusion can be distinguished at a regional scale:

- Elongated plutons, often with oriented fabric, large dimensions and intermediate to acid composition (the Saraya intrusive). These occur in the northwest and south of the region.
- Small intrusions with round, isometric shape, of variable dimensions, and granitic to granodioritic composition.
- Multiple dykes of small dimensions formed of basic and intermediate rocks (gabbro and diorite).

Structure The Daléma Supergroup, on the east side of the Kédougou-Kéniéba Inlier, has regional strike of 340°. In the central and western areas underlain by the Dialé and Make Supergroups the regional strike direction varies between 020° and 040°. These regional bedding and foliation features are readily identified on LANDSAT TM imagery. Lineations observed on the imagery correlate well in the field with bedding and/or foliation.

Work in the field has identified several strike-slip faults that cross through the region. The main shear corridors with apparent sub vertical dip that have been identified in the Kédougou-Kéniéba Inlier are the following:

- The Senegal-Malian Shear Zone, developed between Sadiola (North) and Djidian-Kéniéba (South), with an average direction of N170° representing the tectonic contact between the Daléma Supergroup (East) and Mako and Dialé Supergroups (West).
- The Kakadian-Kérékoto Shear Zone, a North-South trending regional structure that separates the Dialé Supergroup formation (East) from the Mako Supergroup (West). The

shear zone affects the elongated intrusive of Farabana (North) and the Kakadian basic magmatic complex.

These shears do not deform the round-shaped plutons (intermediate and acid composition) and the basic dykes.

Other important faults present the following orientations: E-W to ESE, NE and NW.

The aerial photograph and LANDSAT TM imagery study has allowed identification of a great number of linear structures several kilometres long and fine litho-structural features characteristic of the regional structure of the volcano - sedimentary lithologies.

7.1.2 Geology of the Sonkounkou Project Area

The Sonkounkou project area is underlain by mafic volcanic and sedimentary volcanic rocks of the Mako Supergroup that have been intruded by a granitic pluton that underlies the western part of the property. The metavolcanic-metasedimentary rocks are the same lithologies that underlie the Sabodala project area to the southwest.

The lithologies generally strike in a northeasterly direction and dip steeply to the east and west.

The Kakadian-Kerekoto shear zone is a regional scale feature that marks the boundary between the Mako and Dialé Supergroups. A number of subparallel faults have been inferred from the analysis of satellite imagery to cross the Sonkounkou property in a northeast to north-northeast direction

7.2 DEPOSIT TYPE MODELS FOR SENEGAL

7.2.1 Introduction

The gold deposits of Senegal are typical Birimian type gold deposits similar to those that occur elsewhere in the West African Craton, and particularly in the Ashanti Belt of Ghana, which is the type area for the deposits (See Section 3.0).

The Sabodala deposit that is located to the southeast of the Sonkounkou project is a gold bearing pyritic zone within mafic volcanic rocks. Geological descriptions of the deposit are very limited.

7.3 SONKOUNKOU PROJECT AREA

7.3.1 History of Sonkounkou Project and Surrounding Area

During 1999 Avgold Limited completed and airborne magnetic, electromagnetic and radiometric survey over the project area. Avgold also completed a Landsat Thematic mapping analysis of the area.

No ground follow-up was completed by Avgold prior to joint venturing the property to AXMIN.

7.3.2 Exploration Work by AXMIN (2000)

AXMIN acquired a 100% interest in the project in February 2000 but has not carried out any exploration work to date.

7.4 SAMPLING METHODS AND APPROACH

Work in Senegal will be carried out by the same professional staff that carries out AXMIN's projects in Mali and will utilise the same, industry standard sampling procedures (see Section 6.5).

7.5 SAMPLE PREPARATION AND SECURITY

See Section 6.6

7.6 DATA CORROBORATION

See Section 6.7

7.7 INTERPRETATIONS, CONCLUSIONS, AND RECOMMENDATIONS

7.7.1 Regional Geological Setting

The property is underlain by a geological setting that is known to host Birimian-type gold deposits in Senegal and Mali as well as elsewhere within the West African Craton.

7.7.2 Conclusions

The property itself is a regional scale exploration target that warrants follow-up by a regional geochemical survey similar to those carried out by AXMIN on their Mali projects.

7.7.3 Recommendations

It is recommended that AXMIN undertake a first-pass gold in soil geochemical survey on a 400 x 100m grid with infill where warranted on a 200 x 50m grid.

The geochemical sampling program should be accompanied by the geological mapping (soil and bedrock lithology types) as AXMIN has done in Mali.

AXMIN should also thoroughly review the airborne geophysical and Landsat data that will be provided to them by Avgold, the prior owner of the rights to the project lands.

The estimated cost of the initial phase of exploration for the project is approximately $ 300,000.

8.0 GHANA

The Ghana gold project of AXMIN is located in southern Ghana in the same geological trend and environment as the Birimian-type and Tarkwaian-type, Proterozoic age gold deposit types, which, were first described in Ghana.

Ghana has a long, pre-colonial to the present, history of gold production and is currently the second largest gold producer in Africa at 2,600,000 ounces per year, behind South Africa (14,300,000 oz./yr.) and ahead of neighbouring Mali (965,000 oz./yr.)

AXMIN has one project area in Ghana (Figure 8-2). The Cape Three Points project area covers an area of approximately 75 km^2 at the southeast end of the Ashanti Belt, which is the major gold producing district in Ghana.

8.1 GEOLOGICAL SETTING

8.1.1 Regional Geology of Ghana

The Precambrian geology of Ghana is very complex and not well understood in many parts of the region. The tropical environment, which produces thick vegetation as well as deep weathering, effectively masks geological features at surface. Recent regional airborne geophysical surveys and satellite imagery analysis have provided new insights into the understanding of the regional structural setting.

The Ghanaian portion of the West African Craton is shown in Figure 6-1. The craton is comprised of Early Proterozoic (2.0 to 2.2 billion year old) metasedimentary and metavolcanic rocks referred to as the Birimian in West Africa. The Birimian rocks were deposited on a dominantly granitoid Archean basement complex.

The oldest supracrustal rocks in Ghana are the Birimian Supergroup. The Birimian rocks have been traditionally subdivided into a lower unit comprised dominantly of metasedimentary rocks (greywackes, quartzites, and phyllites) and an upper unit of dominantly mafic to intermediate volcanic and volcaniclastic origin. Current geological concepts would consider the Birimian as a single unit with more or less distinctive volcanic and sedimentary facies, which interbed with one another on a regional and local scale.

The Birimian rocks are host rocks for significant gold production in Ghana with the majority of that production coming from the Ashanti greenstone belts and adjacent metasedimentary terrane (for example the Konongo, Ashanti, Kubi, Ayanfuri, Dunkwa, Bogosu, and Prestea mines).

All of the Birimian units have been weakly metamorphosed to lower greenschist facies in the southern part of Ghana with a gradual increase in metamorphic grade towards the north of the country (possibly indicative of deeper erosional levels).

The Birimian is overlain by the early Proterozoic Tarkwaian Supergroup in the Ashanti and Bui greenstone belts.

The Tarkwaian has been subdivided into four formations; from top to bottom: Huni Sandstone, Tarkwa Phyllite; Banket Series; and the Kawere Conglomerate. The Banket Series overlying the Ashanti greenstone belt is also a major host rock for gold mineralisation in Ghana.

The Birimian volcanic belts formed in six, north to north-northeast trending, greenstone belts (Kibi-Winneba, Ashanti, Sefwi-Goaso, Bui, Bole Navorongo, and Lawra) separated by “basins” of Birimian clastic sedimentary rocks. Davis et al (1994) concluded that the volcanic belts developed as a series of immature island arcs that were accreted to the West African Craton during subduction of oceanic crust. Continued subduction closed the basin during the Eburnean orogeny (2.18 Ga) and is characterised by syntectonic emplacement of granites. The Eburnean orogenic event uplifted and eroded the Birimian rocks and Tarkwaian clastic sediments accumulated in foreland basins. The tectonic environment was characterised by NW-SE shortening and evolved from thrust to strike-slip dominated tectonics.

The Birimian units have been isoclinally folded and extensively faulted. The major regional structures are prominent fault systems that parallel the north-northeast structural and metamorphic fabric. The regional fault structures commonly occur along the transition zone between Birimian metasedimentary and metavolcanic rocks. There are also numerous west to northwest cross faults. The overall structural pattern is very complex and poorly understood in most areas of the country.

Two distinct felsic to intermediate intrusive rock types have been described in Ghana and are locally referred to as the “Cape Coast” and “Dixcove” types. The widespread Cape Coast type are dominantly foliated muscovite-biotite granites and granodiorites, which occur as concordant masses within metasedimentary Birimian host rocks. The less widespread Dixcove type are non-foliated, hornblende granitoids of felsic to intermediate composition. Age dating indicates that the Dixcove (2.1 to 2.2 billion years) are slightly older than the Cape Coast (2.0 to 2.1 billion years) intrusives.

Diabase dykes have been mapped in many areas of Southern Ghana and recent regional airborne magnetic data indicates that some of these can be traced for several hundred kilometres (generally in a north to northwest direction).

Table 8-1
Table of Formations
Ghana

PHANEROZOIC

POST PROTEROZOIC TO CENOZOIC

Residual soils, hardpan, sand

Sandstone

UNCONFORMITY

PRECAMBRIAN

PROTEROZOIC

UPPER PROTEROZOIC (to early Paleozoic ?)

VOLTAIAN SUPER GROUP

Post-Orogenic Sandstone

ANGULAR UNCONFORMITY

SYNTECTONIC "CAPE COAST-TYPE" FELSIC TO INTERMEDIATE INTRUSIVES

Foliated, elongate granite-granodiorite batholiths

SYNVOLCANIC ? "DIXCOVE"-TYPE FELSIC TO INTERMEDIATE INTRUSIVES

Non-foliated hornblende granites

LOWER PROTEROZOIC

TARKWAIAN SUPERGROUP

Huni Formation - sandstone

Tarkwa Formation - phyllite

Banket Series - sandstone, quartzite, and quartz-pebble conglomerate

Kawere Conglomerate – basal conglomerate.

ANGULAR UNCONFORMITY ?

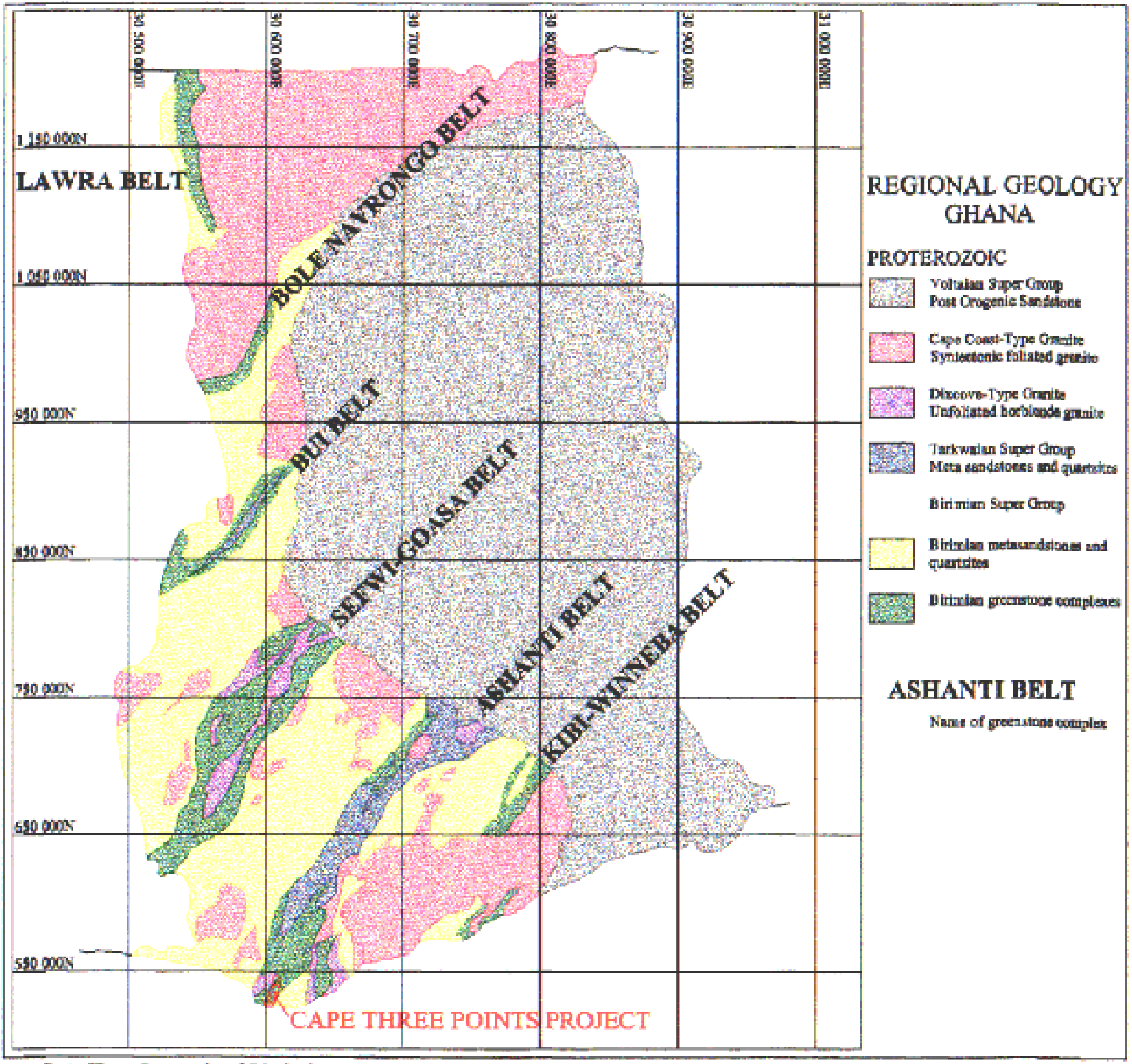
BIRIMIAN SUPERGROUP

Sandstones and quartzites

Mafic to intermediate volcanic flows, pyroclastics, and exhalites

ARCHEAN

Dominantly granitoid basement complex



A. C. A. Howe International Limited

Figure 3 - 1

8.1.2 Geology of the Cape Three Points Area (Figure 8-2)

The Birimian rocks of the permit area are underlain by steeply dipping, north-northeast trending Birimian metavolcanic and metasedimentary rocks that form part of the central and east end of the Ashanti volcanic belt. Dixcove-type hornblende-biotite-granodiorite underlies the west part of the permit area.

Geological mapping and interpretation of the aeromagnetic data indicate that the central part of the property is underlain by volcanic rocks of mafic to ultramafic composition with the southeast sector of the permit underlain by volcanic rocks of andesitic composition.

The northeast sector of the permit in the vicinity of Morrison Hill is underlain by andesitic volcanic units and clastic metasedimentary units with occurrences of feldspar porphyry.

The major quartz vein systems tend to parallel the regional strike of the foliation (020 to 030^o), dip near vertical, and are typically 1 to 2 metres wide.

8.2 DEPOSIT TYPE MODELS FOR GHANA

8.2.1 Introduction

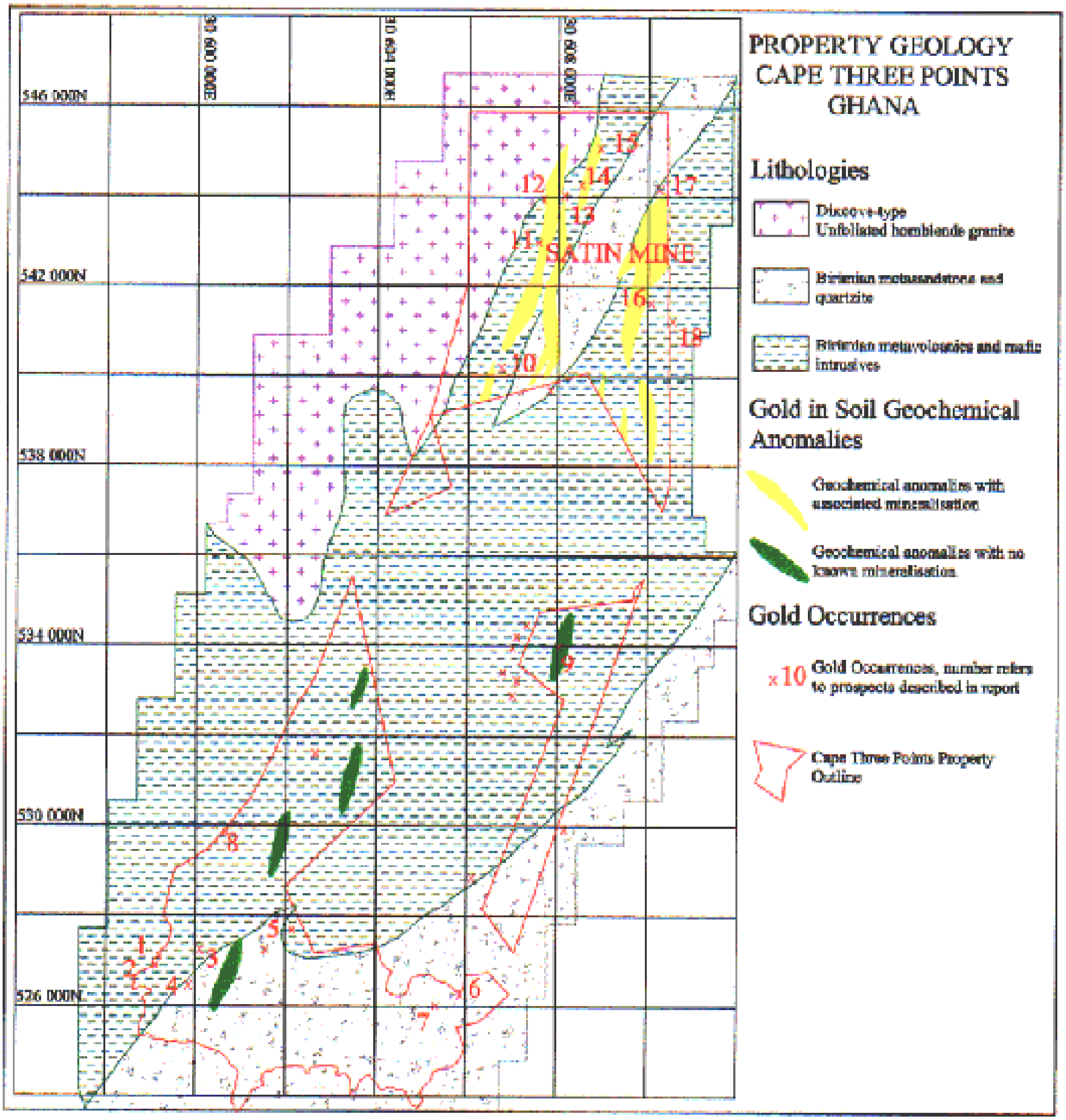
The gold deposits of Ghana are readily subdivided into two distinct types, namely, those hosted within Birimian rocks and those hosted within Tarkwaian rocks. These deposit types have been described in Section 3.0.

Many of the earliest European activities (late 1800's) focussed on the conglomerates of the Tarkwaian Supergroup because they were so closely analogous to the Witwatersrand gold deposits of South Africa. Approximately 7 million ounces of gold have been historically recovered from underground gold operations in the vicinity of Tarkwa.

The historic (pre-colonial) gold production and the majority of colonial to present gold production (55 million ounces) in Ghana has been from the Birimian aged Ashanti greenstone belt and adjacent Birimian metasedimentary terrane. The Ashanti greenstone belt is also historically the largest gold producing area in the West African Craton.

Ghana currently produces approximately 2.6 million ounces of gold per year.

AXMIN's Cape Three Points project area is at the south end of the Ashanti greenstone belt in terrain underlain by Birimian rocks (See Figures 8-1 and 8-2).



A. C. A. Howe International Limited

Figure 8 - 2

8.3 CAPE THREE POINTS PROPERTY

8.3.1 History of Cape Three Points and Surrounding Area

Within the Cape Three Points Permit area, a multitude of old, historical gold workings (some predating colonisation) are reported in the literature, many of which were superficially prospected between 1878 and 1929 by European companies. Unfortunately, very few records are available as to the nature of the work that was carried out or the exact location of the work (Schmidt and Selfe 2000).

The Cape Three Points Permit area was under option to Mutual Resources Limited during the period 1994-95 and to Anmercosa Exploration (Gh) Limited during 1999.

The rights to explore the licence were relinquished by Anmercosa in early 2000. AXMIN entered into an agreement with Consmin (Consolidated Minerals), which provides AXMIN with the right to earn a 72% interest in the permit.

The Satin and Morrison Hill gold prospects are the only areas of the permit that have had recent exploration attention and both have been demonstrated to have significant gold mineralisation and are presently considered the prime exploration targets (King 2000b).

Since acquiring the rights to the permit, AXMIN has undertaken a data compilation related to the historic workings on the property (King 2000a, 2000b) and in March 2001 completed a preliminary drilling program in the vicinity of the Satin gold prospect.

8.3.1.1 Mutual Resources Limited (1994-95)

Mutual Resources Limited (now a subsidiary of Golden Knight Resources Inc.) is reported to have completed a soil geochemical survey over the Cape Three Points permit in 1994-95 and is further reported to have identified significant gold geochemical anomalies.

This data is not public information and has not been reviewed by Howe.

8.3.1.2 Anmercosa Exploration (Gh) Limited (1999).

The following summary of exploration work completed during 1999 is taken from an Anmercosa report (Schmidt and Selfe 2000).

Anmercosa focussed on two limited areas of the property and concluded by that the resource potential of the property was not of a size that would meet the parameters of the parent company (Anglo American plc).

Soil Geochemical Survey

A regional soil geochemical grid (300m x 50m) was established and samples were collected and analysed for gold, arsenic, and copper. The locations of the gold geochemical anomalies (> 50 ppb) are shown on Figure 8-2.

Three gold geochemical anomalies were selected for follow-up:

Morrison Hill anomaly and Rubber Plantation anomaly - Morrison Hill anomaly is in part on the current and the Rubber Plantation anomaly is to the northeast and off of the current permit (the original permit was reduced in size, pursuant to government regulations, in 2000).

Boekrom anomaly – Located west of Boekrom.

The Morrison Hill anomaly was followed up by trenching, adit sampling, and a drill program (41 RC holes).

The Rubber Plantation anomaly was not a strong anomaly but because it was on trend with the Morrison Hill anomaly and gold prospects was followed up by a drill program of 43 RC holes.

The Boekrom anomaly was detailed on a 50m x 50m geochemical grid and followed up with IP and electromagnetic (MAXMIN HEM) surveys. The coincident geochemical, IP, and HEM anomalies were tested by 63 RC holes.

Ground Geophysical Surveys

Apex MAXMIN, multi-frequency, horizontal loop electromagnetic surveys and gradient array induced polarisation surveys were completed in the vicinity of the Boekrom gold geochemical anomaly. The work resulted in two IP anomalies coincident with the gold geochemical anomaly and EM anomalies along the flanks of the IP anomalies.

Morrison Hill Adit Sampling

A series of old adits were discovered on the Morrison Hill property. Most had collapsed, however, 2 were open and were cleaned and channel sampled on 1m – intervals. Adit 1 is approximately 40 metres long, oriented in a NW-SE direction (approximately right angles to the structural trend), and returned a single high gold assay of 23.8 grams per tonne against a low background. Adit 2 is approximately 50 metres long and is oriented NE-SW along the trend of the structure (but may not have been on the structure for its whole length according to the map in the Anmercosa report). Assays ranged from 0.5 to 19.2 grams gold per tonne.

Drilling

Morrison Hill – Four RC fences were completed across the trend of the gold geochemical anomaly for a total of 41 holes. Ten holes returned 2 to 24 metre intersections in the 1 to 2.5 grams gold per tonne range and one hole returned 2 metres of 34.2 grams gold per tonne.

Rubber Plantation – Three RC fences were completed across the trend of the gold geochemical anomaly for a total of 43 holes. Four holes returned 2 to 4 metre intersections in the 1 to 2 g/t Au range and one hole returned 2 metres of 6.2 grams gold per tonne.

Boekrom – Three RC fences were completed across the trend of the combined gold geochemical-IP-HEM anomaly west of Boekrom for a total of 63 holes. Only two holes returned 2 metre intersections >1 to 1.8 grams gold per tonne.

8.3.2 Exploration Work by AXMIN

AXMIN acquired the right to earn a 72% interest in the permit in 2000. AXMIN has yet to initiate a thorough exploration program in the area.

8.3.2.1 Compilation of Gold Occurrence Information

AXMIN has prepared a compilation of previous work on the property (King 2000a, 2000b). The reports provide a review of the Anmercosa exploration program in 1999 and brief descriptions of the 16 significant historical gold occurrences in the permit area. The occurrences are described in Section 8.3.3.2.

Based on the regional gold geochemical database available from the Anmercosa exploration program and King's overview of the gold occurrences, AXMIN decided to proceed with initial reverse circulation drilling tests at the Satin Mine, Ainbak, and Sefwi occurrences.

8.3.2.2 AXMIN Drill Programs (2000, 2001)

Historic information from the assay plans of the underground workings at the Satin Mine suggest the potential to outline a small high grade resource that could be mined easily and either treated in a small plant on site or trucked to existing modern facilities located within a 100km radius.

The objective of AXMIN's initial drill program in 2000 was to assess the grade-tonnage potential of the Satin structure along a strike length of 400 metres and to a maximum depth of approximately 80 metres below surface.

A second reverse circulation drill program was completed in March 2001, which included 9 additional holes in the Satin Mine area and an initial drill program at each of the Sefwi (4 holes) and Ainbak (7 holes) occurrences

Phase 1 (2000)

During October 2000 nine reverse circulation holes (CS-1 to 9) totalling 698 metres were drilled to assess the strike and depth extent of the mineralised zone that was drifted on in the Satin underground workings. The drilling was carried out along a strike extent of approximately 400 metres. The maximum depth tested was approximately 80 metres below surface and 30 to 40 metres below the lowest workings. All of the holes were drilled on a grid west bearing (90^o to the strike) at a dip of 55 degrees.

Four holes (CS-1, 2, 4, and 6) along a strike length of 150 metres immediately below the mine workings encountered significant gold mineralisation (See Figure 8-4 for a preliminary longitudinal section).

The remainder of the drill holes failed to encounter significant mineralisation along strike to the north and south of the workings.

Phase 2 (2001)

Satin Mine area

During March 2001, AXMIN completed 11 additional reverse circulation drill holes (CS-10 to 19) totalling approximately 1,346 metres at the Satin occurrence. The objective of this drilling was to test for sub-parallel zones to the west of the workings and to further evaluate the immediate area of the workings.

These holes are plotted on Figure 8-3.

Ainbak Occurrence

Two occurrences were drill tested, Ainback-1 and Ainback-2, which is 350m to the SSE of Ainbak-1.

On Ainback-1, four RC drill holes, spaced at 40m intervals have been completed to intersect the structure below the workings. The target area is underlain by andesitic volcanics in contact with ultramafic rocks.

The significant assays obtained during the program are summarised below:

Hole No	From	To	Length	g/t Au
CA1	0	22	22	0.43 (2m @ 2.44g/t from 6.0m)
	36	44	8	0.13 (2m @ 0.16g/t from 38m)
CA2	22	30	8	1.19 (2m @ 3.49g/t from 28m)
	64	78	14	0.53 (2m @0.91g/t from 64m)
CA3	24	28	4	0.29
CA4	BARREN			

Soil geochemistry and local structure suggest that Ainbak-1 may represent a sigmoidal opening of total strike length of about 150m. It is possible that a second opening of similar dimensions occurs about 50m to the northwest as demonstrated by soil values of 310, 230 and 1590 ppb on the western side of the ridge (note that Ainbak-1 lies on the eastern flank).

At Ainbak 2, three drill holes have tested historic surface workings extending over an area of about 800m^2, underlain by magnetite bearing ultramafic rocks. The area lies within a weak soil anomaly (40-100ppb) of length 150m and width 50m.

Hole No	Grid North	Grid East	Azimuth deg	Declination deg	Length m
CA8	300S	30E	320	-50	50
CA9	260S	30E	320	-55	47
CA10	340S	35E	320	-55	50

The significant assays obtained during the program are summarised below:

Hole No	From	To	Length	g/t Au
CA8				
CA9		RESULTS PENDING		
CA10				

The Ainbak prospects are interpreted to represent NE trending sigmoidal openings within a dextral N-S structural zone. The strongest gold mineralisation occurs at Ainbak 1 at the contact between the ultramafics and andesites, with the possibility of a second zone about 50m to the northwest. The openings appear to have a strike length potential of about 150m and comprise silicified and quartz veined andesites with associated pyrite and chalcopyrite. Each zone has a potential of around 75,000 tonnes to 100m depth.

Sefwi Occurrence

Four RC drill holes have tested the surface anomaly and workings, on lines 40m apart.

Hole No	Grid North	Grid East	Azimuth deg	Declination deg	Length m
CSF1	Zero	26E	320	-50	56
CSF2	40S	35E	320	-50	48
CSF3	80S	40E	320	-50	50
CSF4	120S	30E	320	-50	38

The significant assays obtained during the program are summarised below:

Hole No	From	To	Length	g/t Au
CSF1	45	50	5	3.55 (1m @ 7.93g/t from 45m)
CSF2	BARREN			
CSF3	BARREN			
CSF4	0	14	14	0.26 (4m @ 0.4 g/t from 8m)

The only intercept of note was 6.95g/t over 2m in the first hole, which tested the area of the collapsed shaft. However, the remaining three holes each carried indications of transported material (including fresh pyrite) over the top 10m. It is quite possible that the surface workings extracted gold from this transported horizon with the source located further upslope. A SW projection of the mineralisation intersected in CSF1 would place the zone about 20m NW of the upslope boundary of the anomaly. In this case holes CSF2-4 would not have tested the zone.

Good potential therefore remains to identify high grade mineralisation.

The third anomaly (Sefwi 3) lies 200m SE of Sefwi 2, on the lower flank of a spur and possibly partly underlain by river flats. Erratic point values of 575 and 440 ppb lie within a 40 ppb threshold, while values of 6890, 805, 1945 ppb occur on the river flats in marked contrast to values upstream which range from 20-395ppb immediately downstream from the other two Sefwi zones.

8.3.3 Mineralisation and Exploration Targets

8.3.3.1 Overview

Regional airborne magnetic and radiometric survey data (Aerodat contracted by government of Ghana) in conjunction with published geology and gold occurrence information (Government of Ghana) are used to delineate exploration targets in the Birimian. Satellite imagery (Landsat TM and ERS radar) is also available and used. The data also provides a basis for interpreting geological contacts and structures within the permit area.

The majority of the permit area is underlain by Birimian metavolcanic and related metasedimentary rocks of the Ashanti greenstone belt. The west edge of the permit area is underlain by Dixcove-type granitic rocks.

There are numerous historical workings in the permit area that predate colonisation. There are numerous gold prospects that had workings developed on them during the 1878-1929 era.

8.3.3.2 Mineralisation, Cape Three Points Permit (Figure 8-2)

King (2000a, 2000b) has provided AXMIN with brief summaries for the 18 gold occurrence areas within the Cape Three Point permit area. The Satin Mine, Morrison, Ainbak, Sefwi and Boekrom occurrences have been referred to in previous sections, as they have been the object of recent exploration efforts in the area. Descriptions of these occurrences are provide below.

The remainder of the occurrences have not received significant exploration attention although the areas have been covered by soil geochemical surveys and some have areas of untested gold geochemical anomalies. The locations of these other occurrences are shown in Figure 8-2 and they are numbered and named as follows:

Awuzarno	(Occurrence 1, Figure 8-2)
Awuseo	(Occurrence 2, Figure 8-2)
Atinchin	(Occurrence 4, Figure 8-2)
Bartie	(Occurrence 6, Figure 8-2)
Katakau	(Occurrence 7, Figure 8-2)
Nkwantanang	(Occurrence 8, Figure 8-2)
Boekrom	(Occurrence 9, Figure 8-2)
Baidoo	(Occurrence 10, Figure 8-2)
Yeiso	(Occurrence 12, Figure 8-2)
Mbapehia	(Occurrence 13, Figure 8-2)
Bipom	(Occurrence 14, Figure 8-2)
Essuadia	(Occurrence 15, Figure 8-2)

The following summaries are taken directly from King's reports (2000a, 2000b) to AXMIN.

Morrison Hill (Occurrences 16, 17, 18, Figure 8-2) – The Morrison Hill occurrence has several old adits and historic native workings known as Akruanumah, Plantation North and Plantation South (respectively Occurrences 16, 17, and 18, Figure 8-2). Two of the adits were opened and sampled by Anmercosa. (See Section 6.3.2.2) Trenching and drilling by Anmercosa indicate the potential for several, narrow, sub-parallel, gold-bearing structures within a 70 metre wide, northeast trending, structural corridor. The mineralised zone correlates with a gold geochemical anomaly that extends for approximately 2 km to the north and south of the adit area.

Anmercosa was exploring for a large resource and their exploration program has not eliminated the potential for a narrow, high-grade gold vein structure.

Satin Mine Area (Occurrence 11, Figure 8-2) – Located about 1 km south of Adiawso, the historic occurrence consists of a number of native pits (Lunn, 1933). Local people first worked the mine and a large open cut and numerous pits were excavated. The Anglo-Egyptian Company started underground work in 1934. In 1937 the property was bought by the Adiawso Mining Company, which continued development. A three-compartment shaft was sunk to 185 feet and levels were developed at 80 feet (adit level), 130 feet, and 180 feet. A winze was sunk from the adit to the 180 ft level and a drift cut at 110 feet. Lateral workings totalled 1,600 feet.

The quartz vein follows a major shear (calcite-chlorite schists) in mafic volcanic rocks. The vein pinches and swells both along strike (north-south) and vertically down-dip. Gold values are described by Kesse (1985) as being patchy. A maximum value of 200 grams gold per tonne over 7 inches was reported. No record of reserves are available. The mine closed in 1948.

Samples collected by Williams (1984) of the country rock and quartz vein from a stockpile near the shaft assayed between 63 grams gold per tonne (silicified andesite) and 1.4 grams gold per tonne (quartz vein).

A gold soil geochemical anomaly established by Anmercosa (Schmidt and Selfe 2000) correlates with the strike trend of the Satin structure and extends for distances of 2.6 km north and 2.3 km south of the Satin occurrence.

Ainbak Prospect - The Ainback prospect (also known as Sawee, Occurrence 3, Figure 8-2) is located in the SW of the licence, about 1km NE of Aketechi in an area of local palm plantation and uncultivated bush. An area of 300m x 600m has been geologically mapped and tested by soil sampling using a grid of 50m x 25m (141 samples). Two historic prospect sites were identified, Ainback 1 which is 350m to the NNW of Ainbak 2.

Ainbak 1 sits within andesitic host rock, at the NE trending contact with an ultramafic body. The prospect lies within a >100ppb soil anomaly of dimensions 200m x 75m, with spot values including 1590 ppb and 6640 ppb. The prospect was reported in a 1902 mining manual as comprising a shaft of 60 feet (18.5m) depth that worked a 12-foot (3.7m) wide quartz lode. Some 100 tons of ore yielding 26dwt / ton (44gmAu/tonne) was reported to be recovered. The collapsed remains of the shaft are in evidence, while 30-40m long depressions to the NNE and SW of the shaft may represent the trace of collapsed underground drives.

Spoil from around the shaft has included siliceous andesite with stringers and disseminations of pyrite and chalcopyrite, with grades to 141g/tAu.

Sefwi Prospect (Occurrence 5, Figure 8-2) - The prospect is located about 2.7kms ESE of Aketechi in an area bounded immediately to the north by a young rubber plantation and to the east by the Cape Three Point Forest Reserve. The prospect itself lies within local palm plantation and uncultivated farmland. The historic Sefwi mine, with old shaft, winder and steam engine is located about 50m into the forest reserve, but mineralisation would appear to extend to the SW into open ground where two further collapsed shafts are seen. The Sefwi mine is believed to have been worked in the early 1900's by a German company although no production records are available.

An area of 500m x 250m has been mapped and covered by soil geochemistry with samples collected on a 50m x 25m grid. The area is underlain by massive andesites bounded to the east by a prominent N-S structure.

Three significant (>100ppb) anomalies have been identified, of which two lie within a single anomaly at the 40 ppb threshold level and are associated with extensive artisanal pits and collapsed shafts.

The Sefwi (anomaly 1) is associated with the old Sefwi mine, and extends 200m to the SW away from the forest boundary, which follows a steep N-S valley. Point values are up to 1260 ppb. This anomaly remains untested.

Sefwi (anomaly 2) lies about 75m to the SW of anomaly 1 and has a length of 200m, width 50m,and is open to the south where it runs into a river flat. Individual point values include 4180, 1020 and 1385 ppb. Artisanal pits are distributed along the anomaly.

8.4 SAMPLING METHODS AND APPROACH

Howe visited the site during the 2001 drilling program. The objective of the Howe site visit was to discuss the project with the AXMIN technical staff, to review the sampling procedures, and to take some samples for confirmation of sampling methods and assays. The site visit (March 22-24) was conducted by Dr. R. Griffis, an experienced Canadian exploration geologist with extensive experience in Ghana and elsewhere in Africa.

Pontil Minerex (an Irish drilling company who have been in Ghana for about 15 years) has been doing the 2001 RC drilling on the Consmin concession for AXMIN. The drilling was completed last March 30, 2001) and was a follow-up to an earlier drill phase in October 2000.

The drill rig used is one of the popular Australian dual drill units (UDR 650), which can do both RC and core drilling and is usually mounted on tracks so it can get into tight spots on heavily forested hills. As Pontil Minerex has been around Ghana for a considerable period of time, they have an experienced Ghanaian crew overseen by a foreign foreman. It is now quite common to mainly use RC drilling to define most of the major gold occurrences in Ghana and to use fairly limited diamond drilling to double-check RC results. In the past, using RC drilling below the water table in many areas created sampling problems that were sometimes overlooked. However, with the current use of very powerful air compressors, the adverse effects of groundwater can be minimized and holes can be kept dry during drilling and therefore give reliable results. At Satin, there is quite limited groundwater and the two holes that Howe observed being drilled were essentially dry and Howe would consider them to be reliable and indicative of the bedrock geology and mineralized intersections.

8.5 SAMPLE PREPARATION AND SECURITY

The sampling procedures are quite standard. Each metre of drill cuttings is kept in a separate, large polysack, which is subsequently split (riffle type) and reduced to a 2-3 kg sample that is sealed on site and sent to the laboratory. In many cases, samples from 2-4m sections are combined to make up a composite sample and, subsequently, if there is an indication of mineralization from the fire assaying, they go back and submit 1m samples to better define the zone. The samples appear to be generally well marked and AXMIN does routine checks, duplicates and submits occasional standards so that, if there is a problem in the assay laboratory, they can usually spot it at a fairly early stage.

For logging the hole, AXMIN's geologist takes a sample from each metre and screens and pans the sample. The coarse chips are logged with a view to identifying lithology, structure, alteration, mineralization, and the fines are panned to see if there is any visible gold, sulphides, iron oxides, etc. If a zone starts to show considerable alteration and/or sulphides and/or visible gold, then 1m samples are submitted to the lab for 50g fire assay. While on the site, Howe observed this logging and believes it to be quite effective and although it does not give information on the possible geometry of a mineralized zone, it is an effective exploration tool.

8.6 DATA CORROBORATION

AXMIN does routine checks, duplicates and submits occasional standards so that, if there is a problem in the assay laboratory, they can usually identify the problem and deal with it at an early stage.

Hole CS – 13 was being completed during the Howe site visit and a zone of mineralization was observed which, has some very fine-grained gold in the panned sample along with sulphides and silicification. The zone is not a vein as such but probably a narrow, silicified shear.

Four, one-metre samples were taken independently by Howe from 69-70m, 70-71m, 74-75m, and 75-76m. Howe selected the samples, was involved in the splitting and bagging, sealing etc, and the samples were always in Howe's custody until such time as they were delivered to the SGS assay laboratory in Tarkwa.

The assay results for the Howe samples are as follows with the AXMIN assay shown for comparison.

Hole	Interval	Howe Assay (g/t) & replicates	AXMIN Assay & replicates
CS–13	69 – 70m	45.7, 34.0, 37.7, 33.8	46.91, 34.51
CS–13	70 – 71m	1.79	2.05, 2.13
CS–13	74 – 75m	0.56, 0.55	0.29, 0.40
CS–13	75 – 76m	0.84, 0.81	0.68, 0.73

Howe observed no problems in the sampling, logging, and analytical work. All reasonable precautions are being taken and AXMIN's site geologist is a meticulous, competent professional of unquestioned integrity.

8.7 INTERPRETATIONS, CONCLUSIONS, AND RECOMMENDATIONS

8.7.1 Regional Geological Setting

The project area is underlain by Birimian age volcanic-sedimentary rocks of the Ashanti Greenstone Belt. This greenstone belt has been responsible for the bulk of Ghana's historic gold production.

The lithologies and geological structure of the Cape Three Points area is poorly understood because of the deep weathering and the lush tropical undergrowth, but is provisionally believed to comprise intermediate volcanics and volcanoclasitics intruded by both granitic and mafic/ultramafic units.

8.7.2 Conclusions

The geological setting is an excellent regional target for Birimian type gold mineralisation. There are many gold occurrences in the area, virtually all of which are narrow veins and/or silicified fractures, often with high but erratic grades. Continuity appears to be a big problem at most of the known occurrences, perhaps because the host rocks are mainly massive, brittle mafic flows, which do not appear to favour continuous or wide zones of mineralisation.

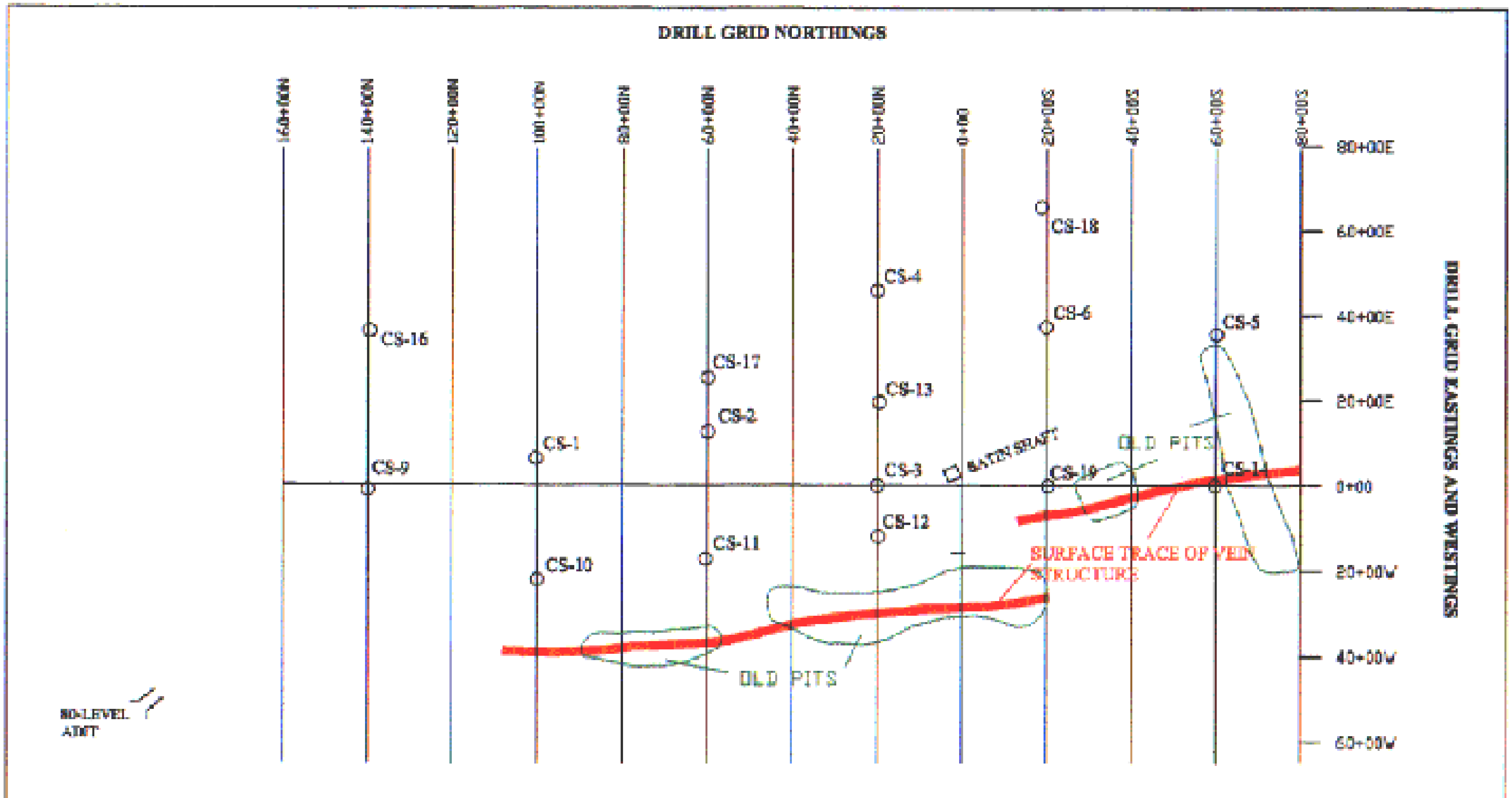
Regional soil geochemical surveys have established a number of untested trends that generally correlate with known gold occurrences.

Historically there has not been much systematic drilling. This coupled with the poor geological exposure in the area, which inhibits any local, detailed understanding of the structure and geological trends may be a primary reason for the lack of success.

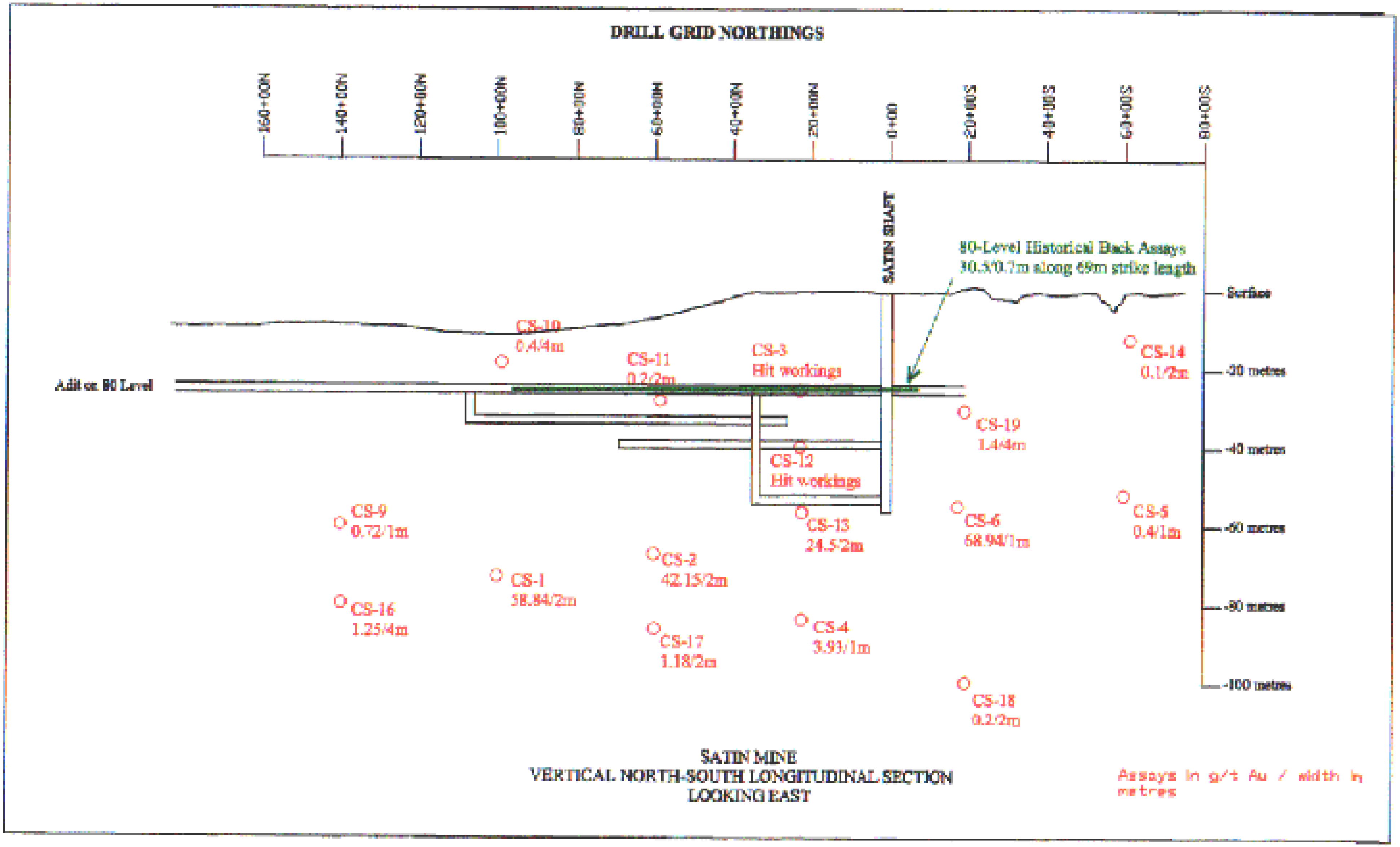
Anmercosa's 1999 primary exploration interest was a large gold geochemical anomaly in the Morrison Hill sector along the northeast boundary of the permit area. Anmercosa concluded that there was insufficient potential for a deposit of the grade and size that would meet the corporate objectives of the parent company (Anglogold).

Howe would conclude that additional exploration work is warranted in the area, however, AXMIN personnel must be very cognisant of the erratic, high grade nature of the known mineralisation in the area and the poorly understood, structurally complex nature of the mineralisation.

AXMIN (King 2001) has made a very preliminary resource estimate for the Satin Mine area. King estimated potential for 54,000 tons @ 32.8 g/t Au for an in-situ content of about 64,800 ozs to a depth of approximately 100 metres. In current terminology, this would be referred to as an inferred geological resource. Figure 8-4 is a vertical longitudinal section of the Satin Mine area.



SATIN MINE
VERTICAL NORTH-SOUTH LONGITUDINAL SECTION
LOOKING EAST


DRILL GRID NORTHINGS
160+00N
140+00N
120+00N
100+00N
80+00N
60+00N
40+00N
20+00N
0+00
20+00S
40+00S
60+00S
80+00S
SATIN SHAFT
80-Level Historical Back Assays
30.5/0.7m along 69m strike length
Surface
-20 metres
-40 metres
-60 metres
-80 metres
-100 metres
Adit on 80 Level
CS-10
0.4/4m
CS-11
0.2/2m
CS-3
Hit workings
CS-14
0.1/2m
CS-19
1.4/4m
CS-12
Hit workings
CS-9
0.72/1m
CS-13
24.5/2m
CS-6
68.94/1m
CS-5
0.4/1m
CS-2
42.15/2m
CS-1
58.84/2m
CS-16
1.25/4m
CS-17
1.18/2m
CS-4
3.93/1m
CS-18
0.2/2m
SATIN MINE
VERTICAL NORTH-SOUTH LONGITUDINAL SECTION
LOOKING EAST
Assays in g/t Au / width in metres

Howe reviewed the historic underground sampling data for the Satin Mine (which cannot be resampled at the present time) and concludes that the range of grades obtained by recent AXMIN drilling in the vicinity of the workings) reflects the erratic distribution of grade seen on the levels and would conclude that the results look very typical for a high grade, vein-type situation which represents one of the most difficult sampling problems in the exploration business.

As an example, on the 80 foot level of the mine, the weighted average grade along a 69 metre strike length was 30.5 grams gold per tonne over an average width of 0.7m. The grades ranged from nil to 216 grams per tonne over widths ranging from 0.1 to 1.6 metres. From the level plan it is clear that only the vein material was sampled.

Eleven of AXMIN's recently completed holes penetrated the plane of the vein zone and intersected nil to 68.9 grams gold per tonne over widths of 1 to 2 metres. The deepest hole was approximately 100 metres below surface.

Howe would conclude that the Satin Mine area has insufficient tonnage potential to support an underground operation in the current economic circumstances.

There may be potential to establish an open cut operation, the depth of which would be dependent upon grade and stripping ratio. Custom milling might be possible at one of the modern processing plants within a 100km radius. Additional closed space drilling would have to be completed to assess this potential.

Finally, Howe would conclude that AXMIN staff must be very careful in determining the exact location of historic data in the field. King's (2001) sketch map in the vicinity of the Satin Mine and his notations with regard to the grid location markings identified for the Anmercosa geochemical grid indicate that there are significant deviations in the grid (i.e. lines crossing or gross errors in the grid information written on the pickets in the field). It would be an error to assume that the geochemical data points relate accurately to the actual UTM co-ordinate system.

8.7.3 Recommendations

Howe would recommend that AXMIN complete confirmatory geochemical profiles in areas proposed to be drilled to follow-up on Anmercosa's geochemical data, unless the target is already defined by historic workings.

An exploration program totalling $600,000 (dominantly reverse circulation drilling) has been proposed to continue the evaluation of untested soil geochemical anomalies and to complete additional drilling in the Satin Mine area. Howe concurs with the proposed program and budget.

9.0 ENVIRONMENTAL AND OTHER LIABILITIES

Howe is not aware of any environmental or other liabilities that would affect either Asquith's or AXMIN's current or future operations.

There is no reason to anticipate any future environmental concerns provided that the Companies operate using environmentally friendly, industry standard procedures that comply with local and international standards

10.0 GENERAL CONCLUSIONS AND RECOMMENDATIONS

10.1 CONCLUSIONS

The Asquith and AXMIN properties all are situated in Precambrian geological settings that on a regional basis have excellent potential for world class gold deposits.

Howe would conclude that the Companies are carrying out their exploration programs in a professional manner, and in particular, that they are utilising sampling methods that meet industry standards for security and reliability of their data.

Based on site visits to the Central African Republic, Mali, and Ghana, and meetings with Asquith and AXMIN management, Howe concludes that the companies are operating in a manner that is in compliance with National Instrument 43-101 (Standards of Disclosure for Mineral Projects).

Both companies need to ensure that, as projects advance to the predevelopment stage, quality control-quality assurance procedures are established to ensure that resource estimation, environmental, and metallurgical requirements will comply with National Instrument 43-101.

Several of the projects, most notably, Bambari (Central African Republic) and Kofi (Mali) clearly have significant coarse free gold in some of the target areas. The Companies have taken steps (sufficient duplicate, replicate and check assays) to identify the existence of the “nugget effect” problem. The reverse circulation samples are routinely panned for free gold and Howe would conclude that this information could be used to identify samples with which the assay laboratory should take extra care with during the assay process (checking screens for free gold, etc.).

Overall Howe would conclude that the Companies have a high potential for success given the large number of significantly anomalous gold prospects that are contained in their property portfolio and further concludes that significant additional exploration is warranted on the projects.

In Howe’s opinion, inadequate contingency concerns on the part of the drill contractors (organization of equipment mobilization, sufficient spare parts, sufficient rods of correct size, etc.) were a major source of delays and early termination of drill programs. The Companies should ensure that their contractors are fully equipped for the program that is planned, and further, should insist on penalty clauses in the event that equipment breakdowns and lack of supplies cause delays to the programs.

10.2 RECOMMENDATIONS

Some general comments follow (Sections 10.2.1 and 10.2.2) that provide the basis for the recommendations put forth in Section 10.3

10.2.1 RC and RAB drilling vs Core Drilling

The companies have relied on reverse circulation and rotary air blast drilling in their initial testing of gold targets on their properties. As the primary target of the companies is a large, bulk tonnage, open pit deposit, this is a very satisfactory and economical approach in the early exploration stages. These methods however provide only limited geological information, which does not allow the geologists to fully determine the structural and lithological setting of the mineralisation.

As the exploration targets mature and advance in their economic potential, Howe would strongly recommend that sufficient core drilling be completed to fully interpret and understand the nature of the gold mineralisation. In addition, if any of the targets are determined to have potential for higher grade, underground operations, then core drilling becomes essential in the hole-to-hole correlation of zones and the building of a database upon which resource estimates can be based.

Ultimately, for the reasons put forth below, drilling on a gold project can only define zones that are favourable for mineralisation. Bulk sampling, either surface or underground, is required to validate the economic potential of gold projects.

10.2.2 Sampling and Assay Methods

In gold exploration and production, sampling is required to accurately determine the grade of the in-place gold mineralisation. Gold commonly displays erratic distribution within vein structures and adjoining wallrock making evaluation of such zones very difficult.

In the early drilling stages of a project this has been and always will be a problem for the following reasons:

> The probability of hitting gold with the drill hole and subsequently having that gold end up in the sample that goes into the laboratory fire assay sample is very low.
>
> > For example, a one tonne cube of typical mineralisation has a volume of approximately 0.4m^3 and a 0.74 metre length of NQ drill core through that volume represents approximately 1/300th of the volume of the surrounding tonne of mineralisation.
> >
> > Assuming a grade of 8 g/t Au, (density 19.4 g/cc) if there is coarse gold present, one grain with a volume of 0.4 cc's would be present in the tonne of ore and there would be a 1 in 300 chance of the hole hitting that grain of gold.

Assuming a grade of 8 g/t Au and uniformly dispersed, 1 mm^3 grains of gold, there would be approximately 64 grains of fine gold and the odds of getting a single grain in the drill core would be 1 in 5.

Standard sampling procedures then further compound the problem as follows:

The sampling procedure for core generally involves splitting the core in half and for the 0.74 metre section of core considered above, the weight of the core sample submitted would be about 3,550 grams. This further reduces by 50% the probability of gold from the core getting into the assay sample.

The sampling procedure for RC and RAB drilling results in a nominal 24 kg sample per metre which is split at the drill site to approximately 2000 grams. In this case there is only a 1 in 12 chance that gold in the drilling sample will get into the assay sample.

Standard analytical laboratory procedures involve crushing the sample to –10 mesh and splitting off a 200 gram sample to be pulverised to –200 mesh which further reduces the chance (1:10) of the gold getting into the assay sample.

The laboratory then uses from 1 to 1/5 of an assay ton for the fire assay. One assay ton is 29.166 grams so therefore, only from 5.8 to 29.1 grams of the original core or RC/RAB sample ends up in the assay sample.

10.2.3 Howe General Recommendations

Howe would recommend that:

1) The companies should ensure that their geological staff fully comprehend the difficulty of the endeavour that they are undertaking and would recommend that the following publications, among others contained therein as references, be studied carefully by them:

In major Archean gold camps such as Timmins and Red Lake, Ontario, the old adage is "drill for structure and sink and drift for gold". Rogers (1982), drawing on the knowledge gained from more than 72 years of mining at the Dome Mine in Timmins, has provided an invaluable insight into the use of diamond drilling in the evaluation of vein-type gold mineralisation. His primary conclusions were that the function of diamond drilling is to locate favourable areas of gold mineralisation, however, he noted that drilling through individual ore veins frequently failed to yield any ore grades and drilling through stringer-type quartz vein zones failed to indicate the true size and grade of the orebody ultimately mined.

A Special Volume published by the Canadian Institute of Mining and Metallurgy (Gill 1968) contains a number of reserve estimation and grade control papers by geologists working in some of the large Canadian gold deposits of that era.

In 1992 the Canadian Institute of Mining and Metallurgy (Vallée et al) published a Special Volume entitled a Guide to the Evaluation of Gold Deposits, which provides a more modern view, particularly with regard to the use of geostatistics.

2) The companies should ensure that all the assays laboratories that they use base their gold assays on a 1 assay ton sample weight (29.166 grams or 45 grains). Many laboratories us as little as 1/5 assay ton and 1/2 assay ton is a common assay aliquot weight. In addition, the +200 fraction screen should be checked for flattened flakes of gold and such gold included in the final assay using the appropriate, standard methodology.

3) The companies should continue to explore the properties that they currently hold and should use their demonstrated expertise to continue to put property packages together within the prospective gold belts of the Proterozoic and Archean greenstone belts of Africa.

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12.0 CERTIFICATES

CERTIFICATE

I, Dino Titaro of 228 Wales Crescent, Oakville, Ontario, Canada, L6L 3X7, hereby certify that:

1. I am and have been employed since 1986 as a geologist by A.C.A. Howe International Limited, Mining and Geological Consultants located at 350 Bay Street, 7th Floor, Toronto, Ontario Canada, M5H 2S6.

2. I am a graduate of Brock University, St. Catharines, Ontario, with an Honours Bachelor of Science (1976) degree in geology and of the University of Western Ontario, London, Ontario with a Masters of Science degree (1980) in geology.

3. I am a Fellow of the Geological Association of Canada and a member of the Canadian Institute of Mining and Metallurgy, Society of Economic Geologists and a P.Geo. registered in the Province of Saskatchewan (APEGS) and Ontario.

4. I have practised my profession in excess of twenty years and have been directly involved in numerous Archean lode gold projects Canada and Africa. I have directly authored or co-authored over 25 evaluation reports pertaining to lode gold projects, all while I was an employee of A. C. A. Howe International Limited, Toronto.

5. I was responsible for overall drafting and management supervision of the preparation of this report and read it thoroughly prior to its completion.

6. The information and data used in this report were obtained from the references cited.

7. As of the date of this certificate, I am not aware of any material fact or material change with respect to the subject matter of this report, which is not reflected in the report, the omission to disclose which makes the technical report misleading.

8. I certify that Dr. R. J. Griffis and Mr. D. C. Leroux, Associate Geologists with A. C. A. Howe International Limited visited the Bambari, Kofi, and Cape Three Points properties as part of the site-visit due diligence related to this report

9. I have no interest, direct or indirect, in the any of the properties nor do I have any beneficial interest, direct or indirect, in the securities of either Asquith Resources Inc. or AXMIN Limited.

10. I have had no prior involvement with the property that is the subject of this report.

11. The report has been prepared in compliance with National Instrument 43-101 and I have read Instrument 43-101 and related documents.

12. This report has been prepared in conformity with generally accepted Canadian mining industry practice.

Original Signed by Dino Titaro

Dino Titaro, M.Sc., P.Geo.
Toronto, Ontario, Canada.
May 31, 2001

CERTIFICATE

I, Daniel C. Leroux, B.Sc., P.Geo., residing at PH 2009 - 7 Walmer Road, Toronto, Ontario, Canada, M5R 2W8, hereby certify that:

1. I am and have been employed from 1993 to 1999 as a geologist and since 2000 as an associate consulting geologist with the firm of A.C.A. Howe International Limited, Mining and Geological Consultants located at 350 Bay Street, 7th. Floor, Toronto, Ontario, M5H 2S6.

2. I am a graduate of Laurentian University, Sudbury, Ontario, Canada, with a Bachelor of Science (1993) degree in Geology.

3. I have more than nine years of Canadian and international exploration and mining experience in precious metals, platinum-group metals and diamonds.

4. I am a Professional Geoscientist (P.Geo.) registered with The Association of Professional Engineers and Geoscientists of Saskatchewan (APEGS) and I am also a member of the Canadian Institute of Mining and Metallurgy (CIMM), the Society of Economic Geologists (SEG) and the Association of Geoscientists of Ontario (AGO).

5. I visited the Bambari Project in Central African Republic in April 2001 as part of the due diligence required for this report.

6. I was responsible for the technical content in Sections 4.0 and have also read the report in its entirety.

7. The information and data used in this report were obtained from the references cited.

8. As of the date of this certificate, I am not aware of any material fact or material change with respect to the subject matter of this report, which is not reflected in the report, the omission to disclose which makes the technical report misleading.

9. I have no interest, direct or indirect, in and of the properties nor do I have any beneficial interest, direct or indirect, in the securities of either Asquith Resources Inc., or AXMIN Limited.

10. I have no prior involvement with the properties that are the subject of this report.

11. The report has been prepared in compliance with National Instrument 43-101 and have read Instrument 43-101 and related documents.

12. This report has been prepared in conformity with generally accepted Canadian mining industry practice.

Original Signed by D. C. Leroux

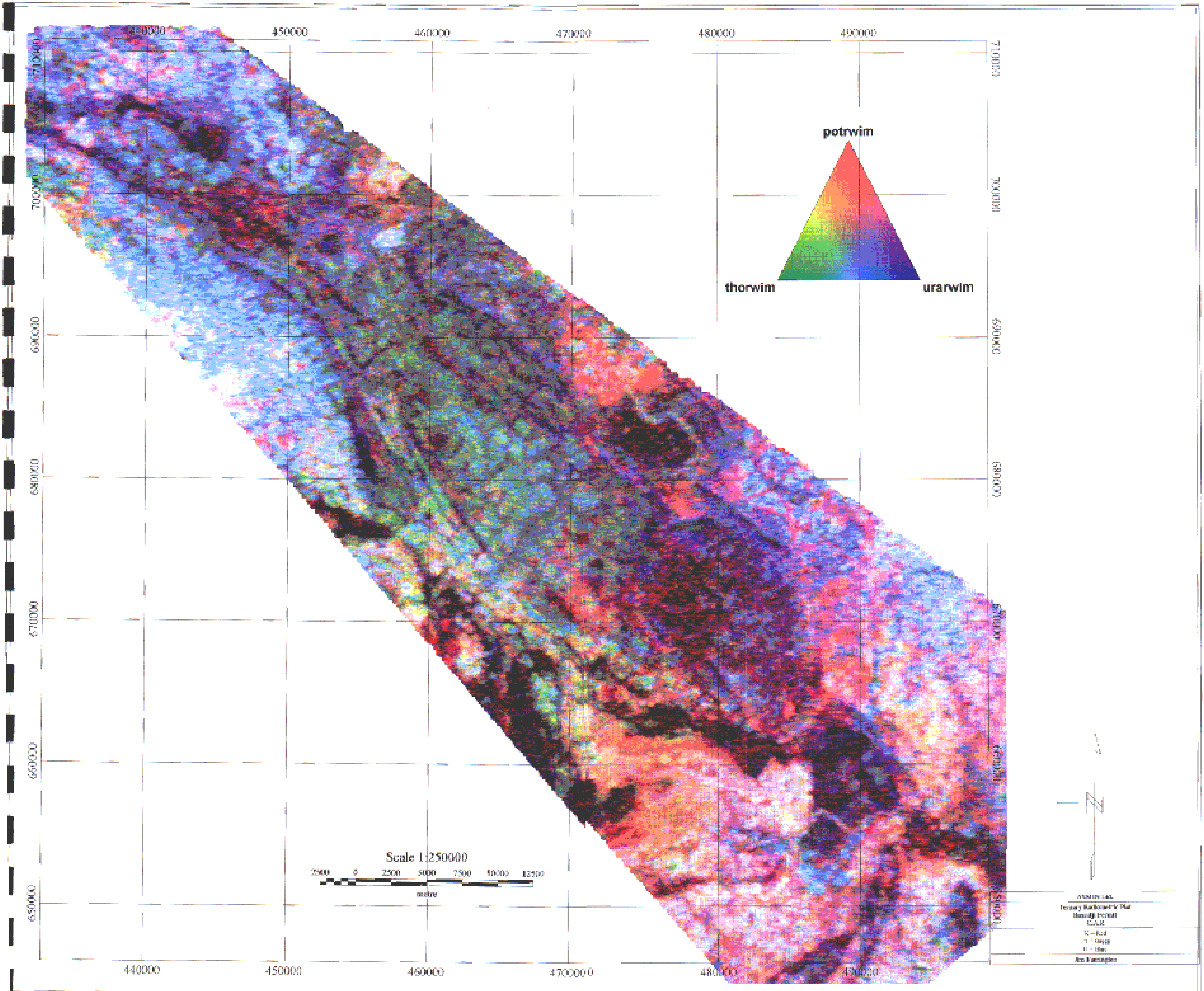
____

Daniel C. Leroux, B.Sc., P. Geo.
Toronto, Ontario, Canada.
May 31, 2001

APPENDIX A

AXMIN REINTERPRETED MAGNETIC AND RADIOMETRIC MAPS

CENTRAL AFRICAN REPUBLIC



440000
450000
460000
470000
480000
490000
710000
700000
690000
680000
670000
660000
650000
potrwim
thorwim
urarwim
Scale 1:250000
2500
0
2500
5000
7500
10000
12500
metre
C.A.R.
K = Red

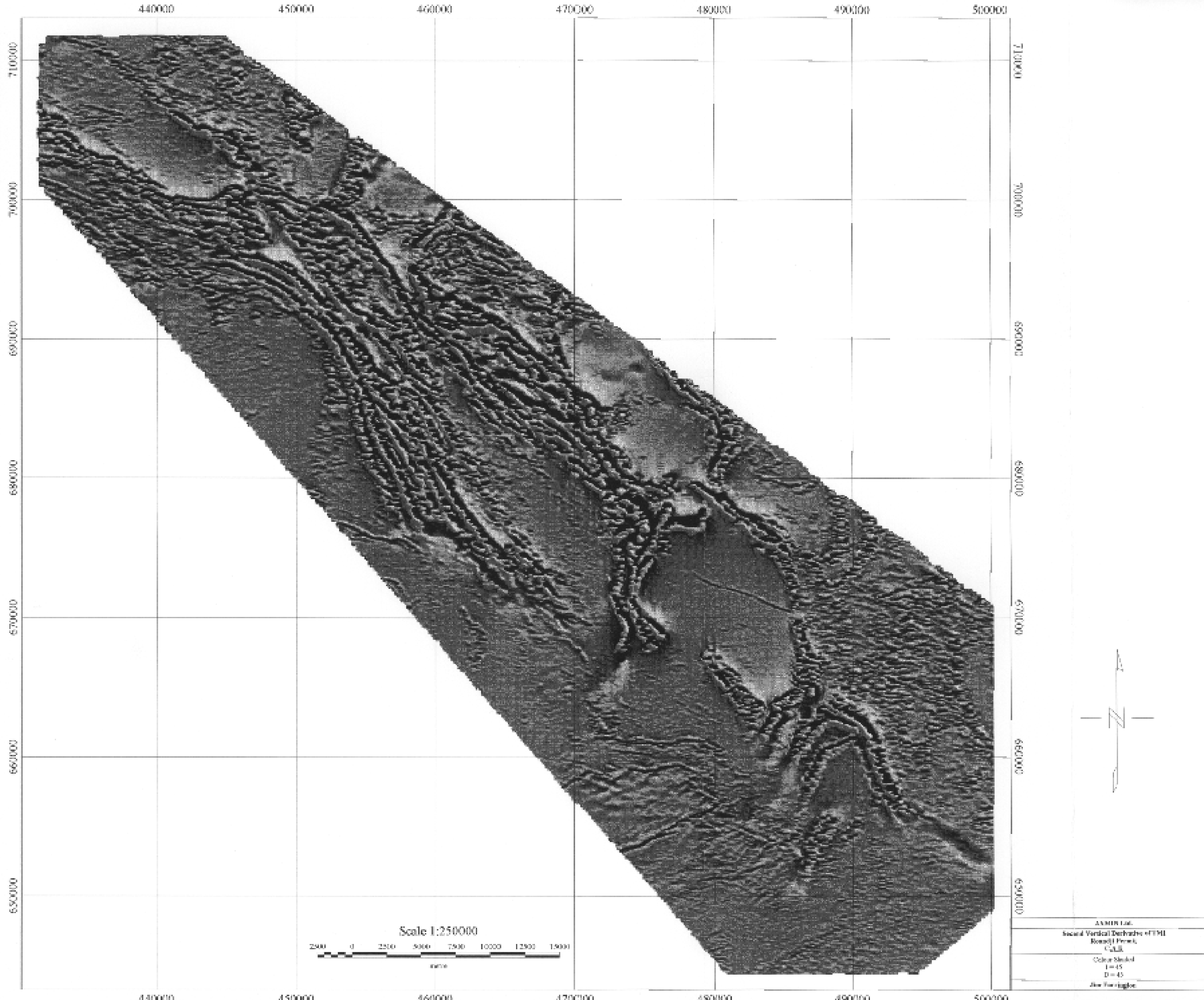

440000
450000
460000
470000
480000
490000
500000
710000
700000
690000
680000
670000
660000
650000
Scale 1:250000
2500
0
2500
5000
7500
10000
12500
15000
Second Vertical Derivative of TMI
Colour Shaded
I = 45
D = 45

Figure 13.

APPENDIX B

XRAL ANALYTICAL CERTIFICATES

CENTRAL AFRICAN REPUBLIC

XRAL Laboratories
A Division of SGS Canada Inc.

1885 Leslie Street
Don Mills, Ontario
Canada M3B 3J4
Telephone (416) 445-5755
Fax (416) 445-4152

CERTIFICATE OF ANALYSIS

Work Order: 063396

To: A.C.A. Howe International Ltd
Attn: Daniel Leroux
7th Floor
350 Bay Street
TORONTO
ONTARIO, CANADA M5H 2S6

Date : 31/05/01

Copy 1 to :

Copy 2 to :

P.O. No. :
Project No. :
No. of Samples : 9 Rocks & C. Pulps
Date Submitted : 25/04/01
Report Comprises : Cover Sheet plus
Pages 1 to 3

Distribution of unused material:
Pulps: Return
Rejects: Return

Certified By :

Dr. Hugh de Souza, General Manager
XRAL Laboratories

ISO 9002 REGISTERED

Report Footer:

L.N.R.	= Listed not received	I.S.	= Insufficient Sample
n.a.	= Not applicable	--	= No result
*INF	= Composition of this sample makes detection impossible by this method		

M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion

XRAL Laboratories
A Division of SGS Canada Inc.

Work Order: 063396 **Date:** 31/05/01 **FINAL**

Element	SiO2	Al2O3	CaO	MgO	Na2O	K2O	Fe	MnO	TiO2	P2O5	Cr2O3	LOI	Sum
Method	XRF100	XRF100	XRF100	XRF100	XRF100	XRF100	XRF100	XRF100	XRF100	XRF100	XRF100	XRF100	XRF100
Det. Lim.	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01
Units	%	%	%	%	%	%	%	%	%	%	%	%	%
Std XRAL04	48.3	11.9	10.8	1?.6	1.??	0.9?	6.48	0.18	?.388	0.?4	0.66	?.?0	99.6
104901	1.44	1.08	0.26	<0.01	0.10	0.?8	67.5	<0.01	?.057	0.45	<0.01	0.90	100.0
104902	2.97	2.01	0.10	0.06	0.07	0.67	65.1	0.01	?.119	0.49	<0.01	0.45	100.?
104903	1.03	0.83	0.10	<0.01	0.08	0.?7	68.4	0.06	?.027	0.09	<0.01	0.45	100.0
104904	2.31	1.46	0.20	0.08	0.08	0.35	65.4	0.06	?.141	0.55	<0.01	1.65	100.1
104905	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
104906	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
104907	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
104908	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
104909	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
*Dup 104901	1.44	1.09	0.27	<0.01	0.10	0.?8	67.5	<0.01	0.056	0.08	<0.01	0.9?	100.0

XRAL

XRAL Laboratories
A Division of SGS Canada Inc

Work Order: 063596 **Date:** 31/05/01 **FINAL**

Element.	Au
Method	FA30C
Det.Lim.	0.03
Units.	g/t
104801	n.a.
104802	n.a.
104803	n.a.
104804	n.a.
104805	n.a.
104806	0.14
104807	0.28
104808	0.50
104809	n.a.
*Dup 104801	n.a.

XRAL XRAL Laboratories
A Division of SGS Canada Inc.

Work Order: 063396 **Date:** 31/05/01 **FINAL**

Element.	Au
Method.	FA50
Det.Lim.	1
Units.	ppb
104801	n.a.
104802	n.a.
104803	n.a.
104804	n.a.
104805	844
104806	6,220
104807	155
104808	515
104809	504
*Dup 104805	n.a.