

**TECHNICAL REPORT ON THE
EXPLORATION ASSETS
OF
FRONTLINE GOLD CORPORATION (FORMERLY
CHRYSOS CAPITAL CORPORATION)
IN
MALI**

**for
FRONTLINE GOLD CORPORATION**

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**Berkhamsted
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TABLE OF CONTENTS

	PAGE
EXECUTIVE SUMMARY	i
1. INTRODUCTION.....	1
2. RELIANCE ON OTHER EXPERTS	2
3. PROPERTY DESCRIPTION AND LOCATION	2
3.1.1. MINIMUM EXPENDITURE REQUIREMENTS	8
3.1.2. ENVIRONMENTAL COSTS	8
3.1.3. LAND ACCESS COSTS.....	8
3.2. OBLIGATORY CLOSURE COSTS.....	8
3.3. ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY	8
3.4. HISTORY AND PREVIOUS WORK.....	9
3.4.1. WORK PRIOR TO 2007	11
3.4.2. WORK POST 2007 BY CRYSTAL RIVER RESOURCES	17
3.4.3. SOIL GEOCHEMISTRY CONDUCTED BY CRYSTAL	20
4. GEOLOGICAL SETTING	23
4.1. REGIONAL GEOLOGY	23
4.2. PROPERTY GEOLOGY	23
4.2.1. DEPOSIT TYPES	27
5. MINERALISATION	27
5.1. LEBRE PLATEAU.....	28
5.2. NIAOULENI EAST.....	31
5.3. NIAOULENI WEST.....	31
5.4. NIAOULENI SOUTH	31
5.5. KANKOU MOUSSA	34
5.6. GOINGOINDOUGOU	37
6. EXPLORATION BY FRONTLINE	40
6.1. DATA COMPILATION.....	40
6.2. GEOCHEMISTRY	40
6.2.1. SOIL SAMPLING.....	41
6.3. TERMITE MOUND SAMPLING.....	41
6.3.1. SIGNIFICANCE OF GEOCHEMICAL SAMPLING WITH RESPECT TO SATELLITE TARGET AREAS	43
6.4. PIT SAMPLING	43
6.5. TRENCH SAMPLING.....	44
7. DRILLING	45
7.1. ROTARY AIR BLAST (RAB) DRILLING.....	45
8. SAMPLING METHOD AND APPROACH	56
8.1. SOIL SAMPLING	56
8.2. TERMITE MOUND SAMPLING.....	56
8.3. TRENCH SAMPLING.....	57
8.4. PIT SAMPLING	57
8.5. RAB DRILL SAMPLING.....	57
9. SAMPLE PREPARATION, ANALYSES AND SECURITY	58
10. DATA VERIFICATION	60
11. ADJACENT PROPERTIES	62
12. MINERAL PROCESSING AND METALLURGICAL TESTING	63
13. MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES.....	63
14. OTHER RELEVANT DATA AND INFORMATION	63
15. INTERPRETATION AND CONCLUSIONS	63
16. RECOMMENDATIONS.....	67
16.1. PHASE 1	67
16.2. PHASE 2.....	69
17. ESTIMATED BUDGETS	70
17.1. PHASE 1	70
17.2. PHASE 2.....	70
18. LIST OF REPORTS CONSULTED.....	71

LIST OF TABLES

TABLE 1 CURRENT STATUS OF THE NIAOULENI AREA PERMITS	4
TABLE 2 EXERCISABLE INTERESTS IN THE NIAOULENI PERMITS.....	6

TABLE 3 NIAOULENI BULK SAMPLE ASSAYS	15
TABLE 4 MINK NON NI 43-101 COMPLIANT RESERVES	15
TABLE 5 SUMMARY OF PROPOSED TARGET AREAS	20
TABLE 6 MINK NON NI 43-101 COMPLIANT RESOURCES	65

LIST OF FIGURES

FIGURE 1.	LOCATION MAP OF THE NIAOULENI PERMIT: MALI.....	3
FIGURE 2.	INFRASTRUCTURE AND ORPAILLAGE EXTENTS: DEGUEFARAKOLE PERMIT, MALI....	5
FIGURE 3.	COMPILATION MAP OF WORKINGS: DEGUEFARAKOLE PERMIT, MALI: 2010.....	10
FIGURE 4.	1997AIRBORNE GEOPHYSICAL SURVEY RESULTS	13
FIGURE 5.	MMI SAMPLES: GOLD, PALLADIUM, COPPER, NICKEL, SILVER AND GOLD REDUCED RATIO (PPB).....	18
FIGURE 6.	2007 SOIL SURVEY BY CRYSTAL RIVER RESOURCES	21
FIGURE 7.	SATELLITE INTERPRETATION AND TARGETS: DEGUEFARAKOLE PERMIT, MALI	22
FIGURE 8.	REGIONAL GEOLOGICAL SETTING OF THE DEGUEFARAKOLE PERMIT	24
FIGURE 9.	LOCAL GEOLOGY FROM SATELLITE INTERPRETATION	25
FIGURE 10.	COMPILATION MAP OF PRE-2007 WORKINGS: LEBRE PLATEAU.....	29
FIGURE 11.	COMPILATION MAP OF FRONTLINE GOLD MAPPING: LEBRE PLATEAU, 2010.....	30
FIGURE 12.	COMPILATION MAP OF PRE-2007 WORKINGS: NIAOULENI	32
FIGURE 13.	COMPILATION MAP OF FRONTLINE GOLD MAPPING: NIAOULENI SOUTH, 2010	33
FIGURE 14.	COMPILATION MAP OF PRE-2007 WORKINGS: KNAKOU MOUSSA	35
FIGURE 15.	COMPILATION MAP OF FRONTLINE GOLD MAPPING: KANKOU MOUSSA, 2010	36
FIGURE 16.	COMPILATION MAP OF FRONTLINE GOLD MAPPING: GOINGOINGDOUGOU	38
FIGURE 17.	COMPILATION MAP OF FRONTLINE GOLD MAPPING: GOINGOINGDOUGOU	39
FIGURE 18.	FRONTLINE GOLD SOIL GEOCHEMISTRY: 2010.....	42
FIGURE 19.	2010 RAB DRILLHOLES IN RELATION TO SOIL GEOCHEMISTRY	54
FIGURE 20.	MINERALISATION AND STRUCTURE OF THE KOBADA LICENCE, MALI.....	64

LIST OF APPENDICIES

APPENDIX 1.	PIT, CHIP AND TRENCH SAMPLE RESULTS
APPENDIX 2.	2010 RAB DRILLING RESULTS

EXECUTIVE SUMMARY

At the request of Frontline Gold Corporation ("Frontline" formerly Chrysos Capital Corporation, name change effective March 1, 2010) ACA Howe International Ltd (Howe) has prepared the following Technical Report on the 94km² Deguefarakole permit (the Niaouleni property), situated in southwestern Mali. The Deguefarakole permit is held in the name of Societe D'exploration Miniere Touba SARL (Touba) and is valid until 2016.

Pursuant to a Purchase and Sale agreement dated September 15th, 2009 and a Modification Agreement dated December 7, 2009 Frontline purchased a 100% interest in the Niaouleni Permits for \$150,000* and 7,140,000 shares issued from treasury. The Niaouleni Permits are subject to vendor retained royalties of a 5% Net Profit Interest royalty and a 2% Net Smelter Return royalty. Frontline also paid \$250,000 to acquire data from previous exploration and to clear titles.

*All currencies in this report are Canadian Dollars, unless otherwise specified.

If a feasibility study is conducted at a future date and the licences are deemed by the owners to warrant conversion to an Exploitation Permit, the owners will form a corporation under Malian law (the "Corporation") for the purpose of developing and operating a mine. Frontline will transfer its interest in the exploitation permit to the Corporation and Frontline will be responsible for arranging the necessary financing for putting the deposits into production. The Government of Mali will receive a free carried interest of 10% in the share capital of the Corporation and will have the option in law to acquire a further 10% in paid up valuation.

Should the Government of Mali elect to exercise its option, the respective interests of the Government of Mali and the respective parties will be as follows:

Parties	Interest
Frontline	80%
Government of Mali	10% (participative - optional) 10% (carried)

Previous workers Mink and Touba have outlined gold resources in several areas of the property, including both in situ and alluvial gold, though these have not been verified by Frontline and do not meet current NI 43-101 resource estimation guidelines.

The Niaouleni Property is located in southwestern Mali. Access from Bamako, the capital, is via 150km of metalled roads, 15km of all-weather laterite road and 42km of dirt road to Niaouleni village, which lies close to several centres of artisanal activity. The climate in the area is typically sub-tropical, with a rainy season from June to October, a hot, dry season from March to May and a cooler dry season in between. During the rainy season the minor dirt roads and tracks are impassable to wheeled vehicles, and travel by any method is difficult.

The Niaouleni area is one of the oldest sites of artisanal working in Mali, with recorded activity dating back to the fourteenth century. Since the 1960s, the property has been included in regional exploration programmes conducted by public companies and in more focused exploration by private companies. Artisanal activity has continued throughout this period.

The principal modern work was conducted by Mink Resources Inc. (Mink), of Canada, who held the property from 1990 to 1999 and took the project to pre-feasibility before failing to raise funding and losing the property. They conducted extensive mapping, pitting, trenching, geophysical surveys and limited drilling. Four principal areas of eluvial and hard rock gold mineralisation were delineated, namely Lebre Plateau, Niaouleni South, Kankou Moussa and Goingoindougou. The Lebre Plateau

contains gold mineralisation comprising stockwork zones up to 25 metres wide. Artisanal workings are principally distributed within a north-northeast-trending zone some 500metres long by 350 metres wide.

Niaouléni South comprises a series of discontinuous, auriferous quartz veins distributed along an 900 metre long, 200 metre wide, north-northeast zone. At Kankou Moussa, a mineralised zone extends in a northeast trend some 1,400 metres long and 1-200 metres wide and along an orthogonal east-northeast trend about 900 metres long and 250 metres wide. Mineralisation appears to reflect a saprolite hosted, gold bearing quartz-stringer zone. A northerly-trending, 520 metre long, 60-100 metre wide zone of gold-bearing quartz stockworks and veins at Goingoindougou has been intensively worked by artisanal miners and is the site of recent intense underground working by local miners.

In 1998 the following historical ‘reserves’ (non NI 43-101 compliant) based partly on pits, trenches, RC drilling and diamond drilling were announced.

Zone	Category	Type	Average width (m)	Length (m)	Depth (m)	Tonnes	Average grade, Au (g/t)
Lebre Plateau	Probable	eluvial	200	300	27	79,500	1.44
Niaouléni South (North of the Dyke)	Possible	Quartz veins	3.16	130	65	150,000	5.76
Niaouléni South (South of the Dyke)	Possible	Quartz veins	3.00	60	65	164,000	1.12
Goingoindougou	Probable	eluvial	20	500	20	300,000	1.37

The reader should note that Howe considers all of the historical resource and reserve estimates reported herein to be non-compliant with Canadian National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101) and as such they should not be relied upon.

Mink believed that waste from artisanal mining at Goingoindougou could provide a further gold resource and also believed that additional gold resources could be present in alluvial material contained within five rivers on the current property.

Howe considers that the historical ‘reserves’ as reported by Mink cannot be relied upon due to reported assay problems, insufficient drilling and interpretation and the lack of available information on QA/QC procedures and accurate survey data for their verification. They do not meet the criteria for reserves required by NI43-101. However, Howe considers that the historical work provides an indication of the project’s exploration potential and the extent of gold mineralisation.

Up to 31st October 1997, total expenditure by Mink amounted CAD\$6,385,129, including CAD\$1.6 million to purchase equipment. No further information is available on the Mink operations, which ceased in 1999 when the company failed to raise finance for the next stage of the operation. Much of the Mink data is available to Frontline, though due to the use of local grids, positional accuracy is limited. The recent surveys by Frontline have helped to establish the positions of the Mink work more accurately, though Howe notes that there are significant errors in the original data and some of the more recently transcribed data that require correction.

An Exploration Permit (‘Permis de recherche’) over the Niaouléni area covering 94 km² was subsequently awarded to Touba, who conducted detailed geological and geomorphological mapping and pitting and sampling at Goingoindougou. A (non NI 43-101 compliant) resource was estimated to be present to a depth of 20m, and adjacent to the area. The maps and plans upon which the estimates were based are not available and no further information is available.

Touba also conducted soil sampling on the property and a number of significant gold anomalies were outlined, both close to the known artisanal workings and in areas with limited or no working. No

follow-up appears to have been conducted. A study for artisanal production was completed and it was estimated that 20 tonnes of ore could be produced and processed daily using a small washing plant.

In 2005, 50% of the area was relinquished and an Exploration Permit, effective 29th March 2006 was granted to Touba, covering the remaining 46 km² of the Niaouléni permit. (Note that this area reflected an original administrative error that misrecorded the area as 92km²). Touba had also submitted an application for an Exploration Permit over a contiguous 48 km² area relinquished in 2005, termed the Deguefarakole Permit and an Establishment Agreement ('Convention d'Établissement') effectively granting the Exploration Permit was signed on 26th March 2006. This corrected the administrative error. Following a further relinquishment of the remaining Niaouléni permit, Touba reapplied for the relinquished ground as the Dioungoulou permit, and for a consolidation of the three permits into one permit. The reapplication and consolidation of permits was granted August 10, 2010 by ministerial Arrêté #10-2480 MM-SG under the name of Deguefarakole Permit.

On 28th February 2007 Crystal River Resources Ltd (Crystal) entered into an agreement with Touba, whereby Crystal could acquire a 95% interest in the property. Crystal compiled all available plans and surface data into a GIS database conducted an ASTER satellite imagery interpretation over the property. Crystal also conducted limited soil and termite geochemical surveys over the Niaouléni West area which permitted the confirmation of previous geochemical results in this area and accurately established the positions of the previous work and artisanal activity in this area. All of the Crystal data has been made available to Frontline.

The Niaouléni Property is underlain by rocks of the Birimian Group, which is divided into the Mako Series volcanic and pyroclastic sedimentary rocks, the Diale flyschoid series and the Dalema Series of metasediments. The Niaouléni area is underlain Diale metasediments.

The property is underlain by a hard lateritic cuirasse overlying laterite intermixed with saprolitic patches forming a transition zone to saprolitised Birimian rocks, which comprises decomposed, kaolinised Birimian metasediments, classified into three separate groups based on colour. The colour differences probably reflect different precursor rock types. Quartz stockworks are observed in all of the three groups. Major north-northeast trending faulting is coincident with the general trend of the artisanal operations. The Lebre Plateau is also traversed by northwest and north-northwest trending lineaments. An east-west mafic dyke offsets the mineralisation at Niaouléni South.

All known quartz vein systems, quartz breccias and stockwork systems carry gold and appear to represent the surface expression of deeper sources, though Mink experienced considerable problems in assaying the material due to an extreme nugget effect. The lateral and depth continuity of the quartz-rich zones has been established though no systematic drilling has been conducted to determine the geometry of the deeper mineralisation.

Howe visited the Niaouléni Property on 19th February, 2007. This enabled an overview on access, local geology and artisanal activity and the identification and GPS location of previous trenching, pitting and drilling on the majority of project areas within the property. Numerous pits have been excavated using windlasses for access and haulage, with simple processing by washing and panning. Although Crystal conducted additional geochemical surveys subsequent to Howe's initial visit, these were of a confirmatory nature and had not materially changed the information reviewed by Howe during the visit.

Howe concluded that the 'reserves' as reported by Mink cannot be relied upon due to reported assay problems, insufficient drilling and interpretation and lack of available information on QA/QC procedures and accurate survey data for their verification due largely to Mink's demise. While extensive zones of gold mineralisation have been outlined to date, much of the data is missing or incomplete.

Frontline is currently compiling a GIS package including all historical data.

Frontline has also completed a programme of soil and termite mound sampling that completes the coverage of the property and has also cleaned and sampled several old trenches and has sampled active artisanal mining pits. A series of RAB traverses have been completed to test geochemical anomalies in the Lebre Plateau, Niaouleni South, Kankou Moussa and Goingoindougou areas.

Howe visited the property on July 24th 2010 and confirmed the positions of the drilling and soil and termite mound sampling. All historical mining areas were visited, and additional areas of ancient artisanal mining identified by Frontline were traversed.

The results of the soil and termite mound sampling have identified a number of areas with significant gold anomalies outside of the known mineralised areas. The work has also indicated the presence of significant westerly to northwesterly trending features that appear to offset or terminate mineralisation in several areas. These cross features have significant associated gold anomalies and that may indicate a later phase of mineralisation, or remobilisation of earlier mineralisation into these later structures.

The RAB drilling results are ambiguous. Many of the holes failed to intersect significant mineralisation, and isolated mineralised intercepts were found in a number of holes. The holes were, in most cases, drilled to the west on the assumption of easterly dipping mineralisation, though on several mineralised sections the mineralisation appears to be near vertical or even west dipping. The spacing between the holes is sufficient that steep mineralisation could be missed on adjacent holes. Comparison with historical RC and core holes also indicates that some of the RAB holes were too shallow to reach mineralisation. It is also noted that a single section with multiple intersections in the majority of the holes was drilled sub parallel to one of the cross fractures, and adjacent drill sections show little or no mineralisation. This may further suggest the presence of mineralised cross fractures. Assay results demonstrate a strong nugget effect due to coarse gold and alternative assay methods are under investigation to compensate for the nugget effect.

Howe has identified a number of targets for follow-up surveys and has recommended a two phase field programme designed to delineate the mineralisation more accurately in the known areas and to complete preliminary testing of newly identified anomalous areas remote from the known mineralisation :

- **Phase 1** would include field examination of newly identified areas of geochemical anomaly together with limited check sampling and infill soil sampling to confirm their trends and continuity. Limited trial geophysical surveying comprising IP traverses across areas of known mineralisation should be conducted.
- In-fill RAB drilling would be conducted in areas where multiple isolated mineralised intersections are recorded. Holes would also be drilled towards the east on selected traverses where westerly dipping mineralisation is suspected. In addition, a series of holes directed to the south should be drilled along those RAB traverses where northeasterly structures are indicated by the geochemical surveys. At Niaouleni South, line 1281300 should be tested by a series of short north- south RAB traverses that cross the original line every 50m. At Kankou Moussa, a series of north-south lines should be drilled across the area of northwest-trending mineralisation identified by Mink.
- The newly defined targets remote from the known mineralisation would be field checked and following limited check sampling and infill soil sampling, single RAB lines would be drilled.
- The RAB drilling in Phase 1 would total 10,560m.
- As part of Phase 2, additional RAB drilling would be planned in the regional areas to follow up the Phase 1 reconnaissance traverses. This could amount to an estimated 7,000m and could enable the planning of diamond drilling in these areas which would be contingent on the results of Phase 1. If the Phase 1 IP work proves successful, the survey would be expanded to other areas. For budgetary purposes it is assumed that a further 20 line km would be conducted in Phase 2.
- Phase 2 would also include the diamond drilling of those targets that can be identified from the current results and represent a logical expansion of the Phase 1 programme. This drilling would

not be contingent on Phase 1 results but would be designed to advance the project towards the resource delineation stage.

- Additional targets defined during Phase 1 would also be diamond drilled.
- For budgetary purposes it is assumed that a total of 5,000m of diamond drilling would be completed in Phase 2.

The top priority areas for diamond drilling are Lebre Plateau and Goingoindougou, where 1,500 m would be drilled on each area.

- At Goingoindougou, a series of diamond drill sections would test the strongest mineralised zones in depth and along lateral extensions of the known mineralisation if warranted. This would comprise four sections with inclined holes 50m, 125m and 200m
- At Lebre Plateau, four sections with holes to 50, 125m and 200m inclined depth would be drilled.

Drilling at Niouleni South and Kankou Moussa would be contingent on the Phase 1 RAB drilling results. In addition, newly identified targets would be scout drilled. A total of 2,000m is allowed for budgetary purposes.

The total cost of the programme is CDN\$2,397,200

1. INTRODUCTION

Frontline Gold Corporation (“Frontline”), formerly Chrysos Capital Corporation (“Chrysos”) holds a 100% interest in the Niaouleni mineral property in Mali, West Africa. Frontline requested ACA Howe International Ltd (“Howe”) to prepare the following Technical Report on the property to provide an independent, technical review of the results of recent exploration and to make recommendations for future programmes.

Frontline entered an Option Agreement with Touba, the owner of the Niaouleni Licences in September 2009 and Modification Agreement in December 2009.

Howe has relied on available technical data and information from earlier operators provided by Touba as hard copy geological reports and maps. A previous partner of Touba, Crystal River Resources (Crystal) compiled all historical data available at the time and conducted satellite interpretations and limited systematic confirmatory soil sampling of previously identified soil geochemical anomalies. The results of this work have also been made available to Howe by Touba. Howe reanalysed the data following a recent visit to Mali, but field verification indicated that some of the historical data contains errors and was misleading in part. Frontline has recently acquired magnetic tapes of additional data which have not yet been translated and is currently preparing a GIS compilation of all historical data assisted by Touba. The interpretation and future programme planning in this report is based on all data that has been made available to Howe to date, though Howe has not had access to Frontline’s on-going GIS compilation or to any recently acquired historical information.

Frontline has completed extensive geochemical surveys and conducted a small RAB drilling programme on the property. The results of this work have been analysed by Howe.

The property was initially visited by Dr D Patrick of Howe on 19th February 2007 and more recently on July 23rd, 2010 in the company of geologists Mamadou Diallo of Touba and Marie-France Dikizeyko, of Frontline. Diallo is familiar with the Niaouleni property, having worked previously on the various projects, and Dikizeyko is familiar with project data and also acted as an interpreter with geological input during the visit. The visit enabled an overview on access, local geology and artisanal activity. The positions of previous trenching, pitting and drilling were established by GPS and the locations of Frontline’s recent surveys and RAB drilling on the various project areas within the property were confirmed. Dr Patrick spent the remainder of the period July 21st-25th in Bamako, Mali, reviewing data held by Touba and Frontline and holding detailed discussions with Touba and Frontline personnel.

The major in situ mining sites were inactive on the day of the visit due to the onset of the rainy season, but intensive activity had clearly been underway in recent times in several areas. At Goingindougou, numerous pits had been excavated using windlasses for access and haulage, with simple processing by washing and panning. Groups of local women were seen to be working eluvial/alluvial deposits at shallow depth (<1 m) on the periphery of the Kankou Moussa eluvial mining area. They were scraping unconsolidated surficial deposits into pans and washing the material in small pools. Coarse gold was observed in their pans. Women were also working waste material from the Goingindougou mining area; here the gold was very fine grained.

To the best of Howe’s knowledge, having taken all reasonable care to ensure that such is the case, the information contained in this report is in accordance with the facts and makes no omission likely to affect the import of such information. Previous workers have outlined gold resources in several areas of the property, including both in situ and alluvial gold, though these have not been verified by Howe and do not meet current NI 43-101 resource estimation guidelines. They are described below in the section on historical resource estimates.

2. RELIANCE ON OTHER EXPERTS

Howe is not qualified legally to comment on the agreements between the parties described below and has relied on information provided by the client and their legal advisers. Howe is informed by Frontline management that transfer of the titles is in process and that the purchase agreement provides that the permits are held in trust pending completion of the transfer process.

3. PROPERTY DESCRIPTION AND LOCATION

Niaouléni Property is located in southwestern Mali, adjacent to the Guinea border, immediately south of the Niger River centred on geographic coordinates 11°35'N latitude, -8°35'W longitude (Figure 1).

An Exploration Permit ('Permis de recherche') covering 94 km² was awarded over the Niaouléni project area to Touba on 4th December 2002 for three years, under 'arrêté Ministeriel' Number 02 2438/MMEE-SG which provided the absolute confirmation of the Permit. This was mistakenly recorded as 92km² by the authorities both in the Establishment Agreement (*Convention d'Établissement*), which granted the permit and the arrêté. In 2005, on the third anniversary of the permit, 50% of the area was relinquished (though this was not officially confirmed until 26th December 2006) when an Exploration Permit, effective 29th March 2006 was granted to Touba covering the remaining 46 km².

Touba had also submitted an application for an Exploration Permit over the contiguous 48 km² Deguefarakole Permit that covered the area relinquished in 2005, and the Establishment Agreement ('*Convention d'Établissement*') effectively granting the Exploration Permit was signed on 26th March 2006. The arrêté Number 07 2523 MMEE-SG, was issued on 20th September 2007. This essentially demonstrated the administrative error as the total area granted was 94 km² though the official area remained 92 km². 50% of the permit would have to be relinquished on September 20th, 2010 and a further 50% relinquishment would be required on September 20th 2013. A further 50% of the original Niaouléni arrêté 02 2438/MMEE-SG was relinquished on 10th August, 2009, reducing the permit to 23 km² and the permit was re-issued as arrêté Number 09 1998/MM-SG. This permit was valid until 10th August 2012, but could be renewed beyond that time as an exploration permit. Touba applied for the relinquished ground as the Dioungoulou permit. Touba reapplied for the relinquished ground as the Dioungoulou permit and for a consolidation of the three permits into one permit. The reapplication and consolidation of permits was granted August 10, 2010 by ministerial Arrêté #10-2480 MM-SG under the name of Deguefarakole Permit valid until 20th September 2016.

Because of the error in the original documentation, the consolidated permit is officially recorded as having an area of 92 km², though the authorities are aware that the actual surface area is 94km². Frontline is in communication with the authorities to determine how this error can be corrected. Because the coordinates are fixed in the documentation and the error was with the original estimation of area contained within the corner coordinates, Frontline is exclusively permitted to work within the entire area bounded by the corner coordinates and no other party can apply to take up the apparent shortfall of 2 km² within the licence.

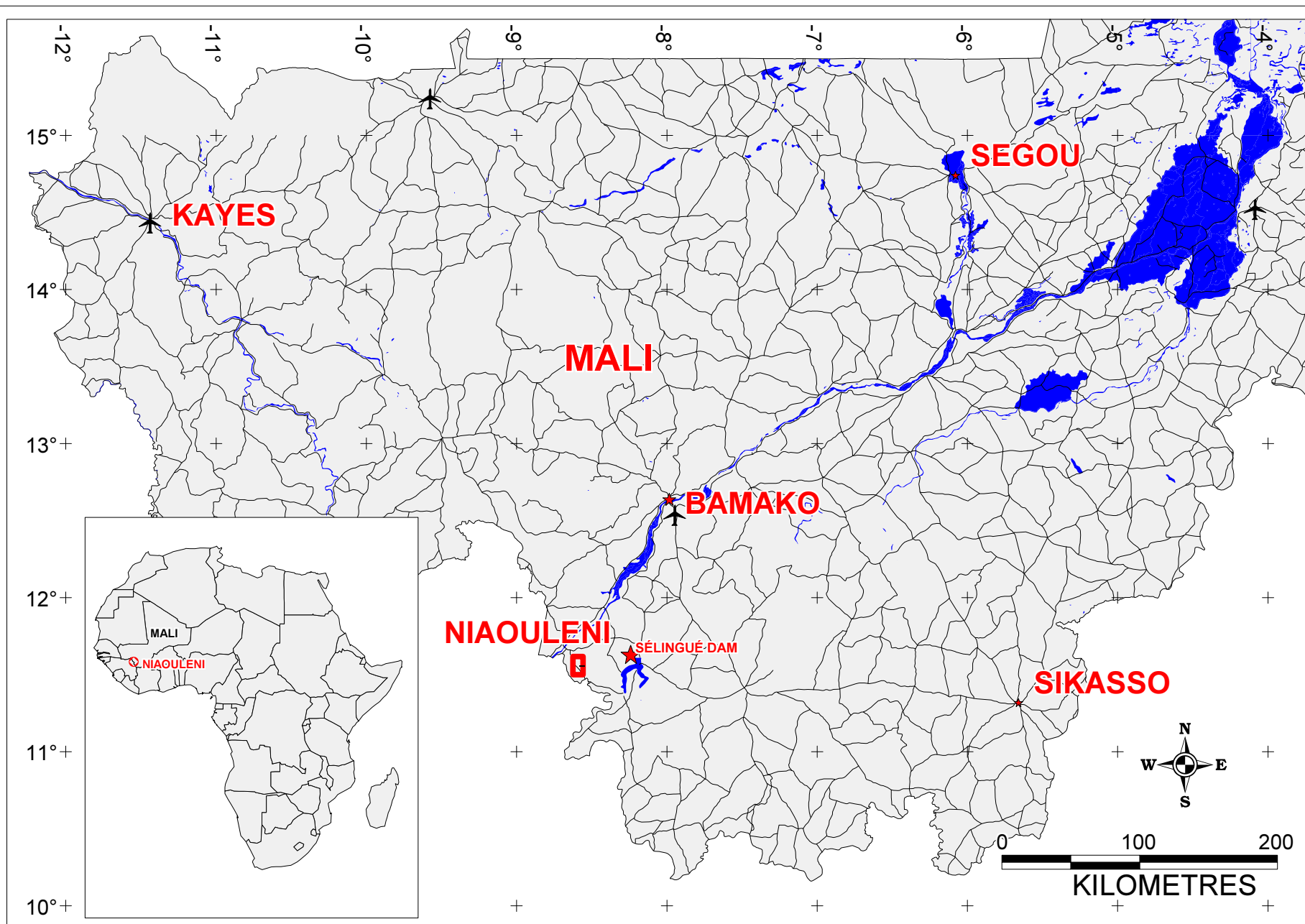


FIGURE 1: LOCATION MAP

The consolidated permit is valid for the duration of the current Deguefarakole permit, that is, until 20th September 2016. The status of the permit is summarised below:

Permit	Arrêté Number	Area (km ²)	Date granted	Relinquishment due	Valid until
Deguefarakole	10-2480 MM-SG	92/94	10 th August 2010	1st: September 20 th , 2010 2 nd : September 20 th , 2013	2 nd September 2016

TABLE 1. CURRENT STATUS OF THE NIAOULENI AREA PERMITS

If, after the final three year period of validity of a permit, the work carried out has led to the discovery of an economically viable deposit, an application will be made for an exploitation permit. However, if results are encouraging, but economic viability will not be demonstrable without additional work, a new application will be required to renew the permit and continue exploration.

Previous operators and holders of the Niaouléni permit, Mink Mineral Resources, completed a land survey and established concrete pillars at the corners of the combined 94 km² property. These were relocated and checked on behalf of Touba in 2003 by surveyors from PDRM (Programme for Mineral Resources Development) using differential GPS. No further details are available and Frontline has not surveyed the boundaries nor confirmed the positions of the corner pillars.

Mineralisation has been identified on the property in the Lebre Plateau, just north of Niaouléni village, in the Niaouléni South area, at Goingoindougou southwest of the village and Kankou Moussa. In addition, numerous alluvial and eluvial workings have been, or are currently active on the property. The positions of the major workings have been confirmed by Howe using a GPS and Frontline has also reconfirmed the positions of prior surveys, geochemical anomalies and artisanal sites by GPS. Diallo has recently identified two previously unreported zones of ancient eluvial workings to the west of Niaouléni village (Figure 2). No mineral resources or reserves compliant with NI 43-101 guidelines have been identified on the property and there are no significant waste dumps or tailings. Infrastructure is shown on Figure 2.

Pursuant to a Purchase and Sale agreement dated September 15, 2009 and a Modification Agreement dated December 7, 2009 Frontline acquired a 100% interest in the Niaouléni Permits from Merrex for \$150,000 cash plus 7,140,000 shares from treasury. The Niaouléni Permits are 100% owned by Frontline subject to vendor retained royalties of a 5% Net Profit Interest royalty and a 2% Net Smelter Return royalty.

Note, all currencies in this report Canadian dollars unless otherwise stated.

If a feasibility study is conducted at a future date and the permits are deemed by the owners to warrant conversion to an Exploitation Permit, the joint venture partners will form a corporation under Malian law (the "**Corporation**") for the purpose of developing and operating a mine. Frontline will transfer its interest in the exploitation permit to the Corporation and Frontline will be responsible for arranging the necessary financing for putting the deposits into production. The Government of Mali will receive a free carried interest of 10% in the share capital of the Corporation and will have the option in law to acquire a further 10% in paid up valuation.

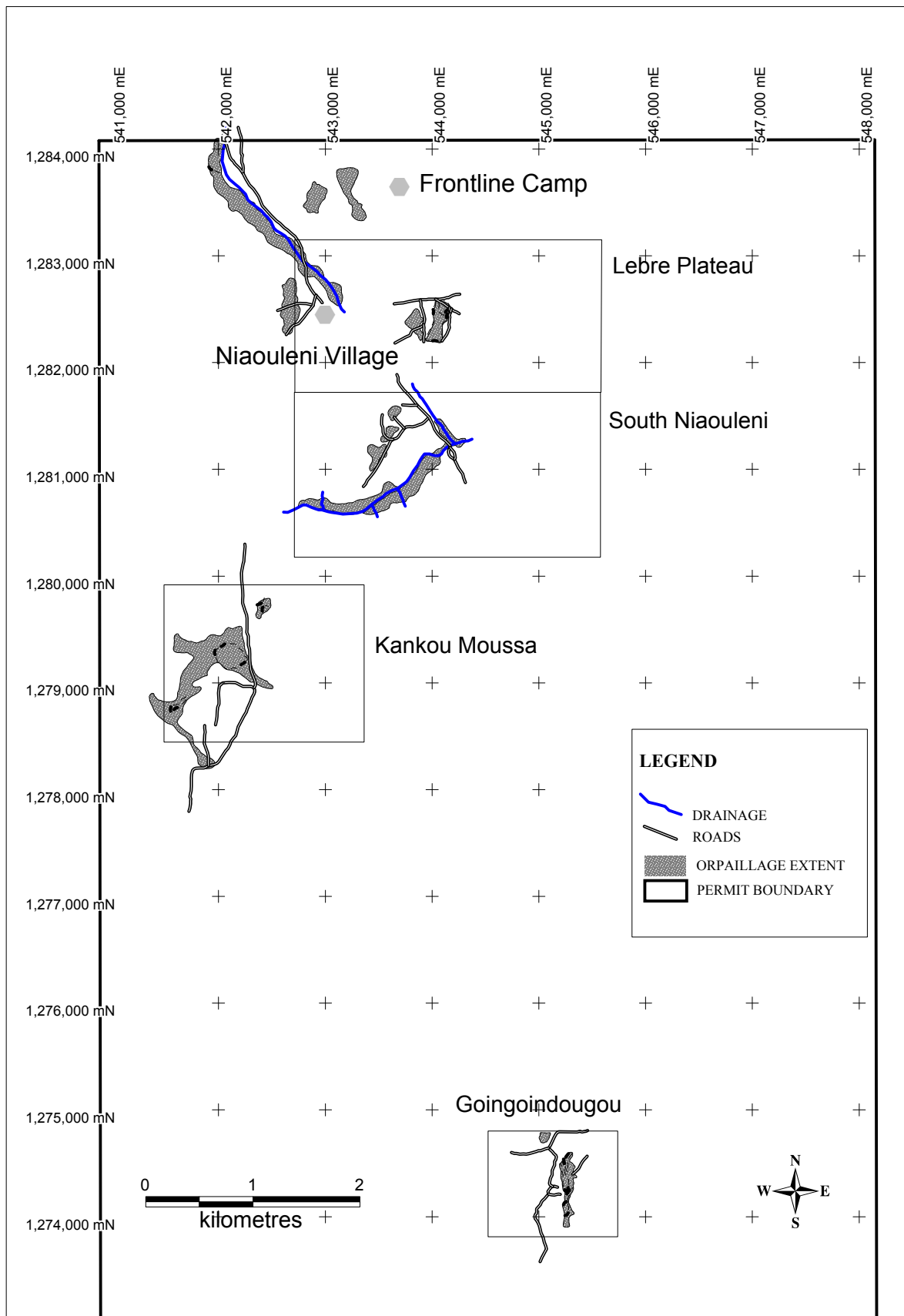


FIGURE 2: INFRASTRUCTURE AND ORPAillage EXTENT:
DEGUEFARAKOLE PERMIT, MALI.

Should the Government elect to exercise its option, the respective interests of the Government of Mali and the respective parties will be as follows:

Parties	Interest
Frontline	80%
Government of Mali	10% (participative - optional) 10% (carried)

TABLE 2. EXERCISABLE INTERESTS IN THE NIAOULENI PERMITS

Deposits that are subject to mining regulations are owned separately from the land and are granted to companies that file applications for mineral prospecting, exploration or exploitation, in accordance with the Mining Code. The licences that are granted through the Mining Code are:

- Exploration
- Prospecting
- Small-scale mining, and the Exploitation licence.

Subject to an agreement with the Government, the permits and authorisations for minerals substances of a given group can be extended to the whole group.

During an exploitation phase, the Government requires the establishment of a new company under Malian law, with a 10% free-carried share belonging to the Government. Based on its own discretionary capacity, the State can purchase up to an additional 10 % stake (in cash) or through pro rata expenditure.

In order to obtain an exploration permit or an authorisation for prospecting, the applicant must provide various technical and financial details that are sent to the Mines Minister and examined by the National Directorate of Geology and Mines (DNGM). If deemed compliant, the Mines Minister will sign the document. Within 30 days following the signature of the Establishment Agreement, the Government will grant the applicant the permit or prospecting licence, triggering the relevant payments.

Licence fees are as follows:

- On issuing of prospecting authorisation: CFA400,000
- Renewal of prospecting authorisation: CFA400,000
- Issuing of an exploration permit: CFA500,000
- Renewal of an exploration permit: CFA500,000
- Issuing of an exploitation authorisation for a small-scale mine: CFA1.0 million
- Renewal of an exploitation authorisation for a small-scale mine: CFA1.5 million
- Issuing an exploitation permit: CFA1.5 million
- Renewal of an exploitation permit: CFA2.0 million.

Area charges for exploration and prospecting *

- First period: CFA1,000/km² per year
- First renewal: CFA1,500/km² per year
- Second renewal: CFA2,000/km² per year
- Exploitation permits: CFA100,000/km² per year
- Small-scale mine exploitation: CFA50,000/km² per year

(US\$ = CFA491 at end of March 2007)

The renewal of an exploration permit or of an authorisation for prospecting requires payment of renewal fees and surface fees. For the first renewal, the surface area of the exploration permit is reduced by

50%. For the second renewal, the remaining surface area is reduced again by 50%. For prospecting authorisations, only one renewal is allowed, although there is no reduction in area.

A holder of a mining title must periodically supply the DNGM with the following documents:

1. During the month immediately following the attribution of the permit or the authorisation, the updated working budget for the remaining of the current year is required.
2. Before December 1st of each year, the programme of works to be carried out during the following year (in conjunction with the anticipated expense) must also be supplied.
3. The following periodic reports:
 - During the first fortnight of each quarter, a quarterly report giving a summary of the activities that were carried out during the previous quarter,
 - During the first quarter of each year, an annual report that details the activities and the results achieved during the previous year.

The transfer or reassignment of exploration permits (and the authorisation for exploitation of a small-scale mine) require the holder to submit an 'application for transfer' to the Mines Minister. The transferee will have to supply:

- Commitment to pursue works programme.
- Documents showing the new company's technical and financial capabilities.
- Certified Copy of Compliance with the agreement that was established between the transferee and the beneficiary.

Holders of mining titles are required to comply with the legislature and regulatory provisions related to environmental law in force in Mali.

The State guarantees:

- The right to occupy and use all necessary lands for exploration, prospecting and exploitation works in accordance with the Mining Code. The occupying and using of the land will not lead to any payment of fees, duties, royalties or other rights that are not been clearly stated.
- The possibility to move and relocate, upon request of holders of mining rights, the populations whose presence would hinder the works. The holders of mining rights must cover the expenses of the movement and relocation of these populations.

Holders of exploration or prospecting authorisations are required to:

- Comply with the mining law.
- Carry out rehabilitation works and security duties on site.
- Supply the mining administration with a report summarising the exploration that was carried out and their impact on the environment, and the reclamation and security works that have been achieved.
- Report updates within one month.

The holders of mining claims must:

- Comply with general conditions in accordance with the regulations in force.
- Where job applicants have equal qualifications, Malians will have preference.
- Set up a training programme with a view to promoting Malian personnel.
- Proceed with a gradual replacement of expatriate personnel by nationals who have acquired the same training and job experience.

Holders of mining claims and their sub-contractors can recruit those expatriate personnel that are needed for an efficient and successful execution of their activities. The State will facilitate the paperwork related to the entry and stay of such personnel, in accordance with the regulations in force.

During the exploration or prospecting phase, technical materials, machineries, tools, utility vehicles and generators can be imported free of taxes and duty by the licence holder. However, when the prospecting or exploration licence is near its expiry, these materials will have to be re-exported, unless the beneficiaries can justify their use during the exploitation phase.

The holder of a mining right can at all times renounce his claim, provided that the holder of the mining right has complied with all the remedial provisions of the Mining Law. In the case of non-compliance, the Mines Administrator will have rehabilitation carried out at the expenses of the Holder.

Frontline has met all requirements and the signed licence documents, viewed by Howe, grant Frontline access to all areas. Additional permits are not required for exploration or mining activities.

3.1.1. MINIMUM EXPENDITURE REQUIREMENTS

The expenditure requirements for Deguefarakolé as shown on the Establishment Agreement for three years is CAD\$1,035,628 and for Niaouleni is CAD\$512,077 from date of granting. The requirements for both properties will be more than met by the proposed programme and budget.

3.1.2. ENVIRONMENTAL COSTS

Compensation must be paid to landowners for damage to trees and land during exploration and any excavations must be made good or be fenced to avoid danger to animals. The cost is negotiated with the landowners

3.1.3. LAND ACCESS COSTS

None

3.2. OBLIGATORY CLOSURE COSTS

At the end of the exploration stage, any damage to land must be made good; the mining administrators will inspect the land on termination of exploration to ensure satisfactory rehabilitation works have been carried out. There are no fixed costs associated with this work.

3.3. ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

Access from Bamako, the capital, transportation and administrative centre of Mali is via 150km of metalled roads to the large dam and hydroelectric scheme at Selingue, 15km of all-weather laterite road (which could be readily upgraded) from Selingue to Selefougou, and 42km of dirt road from Selingue to Niaouleni. Previous operators Mink Resources Inc. (Mink), of Canada, constructed a bridge across the Fie River, which permits virtually all year access to Niaouleni village by four-wheel drive vehicles, though off-road access is difficult in the rainy season and the access road to the village may be temporarily closed on occasion in September and October, towards the culmination of the rainy season. This does restrict field activities.

Access to the artisanal workings and project areas is generally good, via bush tracks passable to 4WD vehicles. Frontline recently constructed a camp in the northern part of the property and has opened 46 km of 4WD vehicle tracks to provide access to all parts of the property.

The local population is centred on villages around the various artisanal mining centres and can vary greatly as miners migrate to areas with rumoured discoveries. Niaouleni is a relatively settled community proximal to several centres of artisanal activity; the men tend to work exclusively in the mining areas while the women wash and concentrate the gold. Other villages in the area cultivate crops which, supplemented by limited hunting are sufficient to meet local needs.

The area lies on the southern edge of the Sahel or sub-Saharan belt. The climate in the area is typically sub-tropical, with a rainy season from June to October, a hot, dry season from March to May and a cooler dry season in between, where night-time temperatures fall to 10-15°C. Year around average temperature is 30° C with hot dry season temperatures routinely above 40°C. During the rainy season the minor dirt roads and tracks are essentially impassable to wheeled vehicles, and travel by any method is difficult.

The property lies close to the Guinean border in an area of peneplanation. The countryside is open and rolling, with flat, lateritic areas and incised stream valleys. Mean elevations range from 330 to 450m above sea level. Drainage is predominantly to the east towards the River Fie.

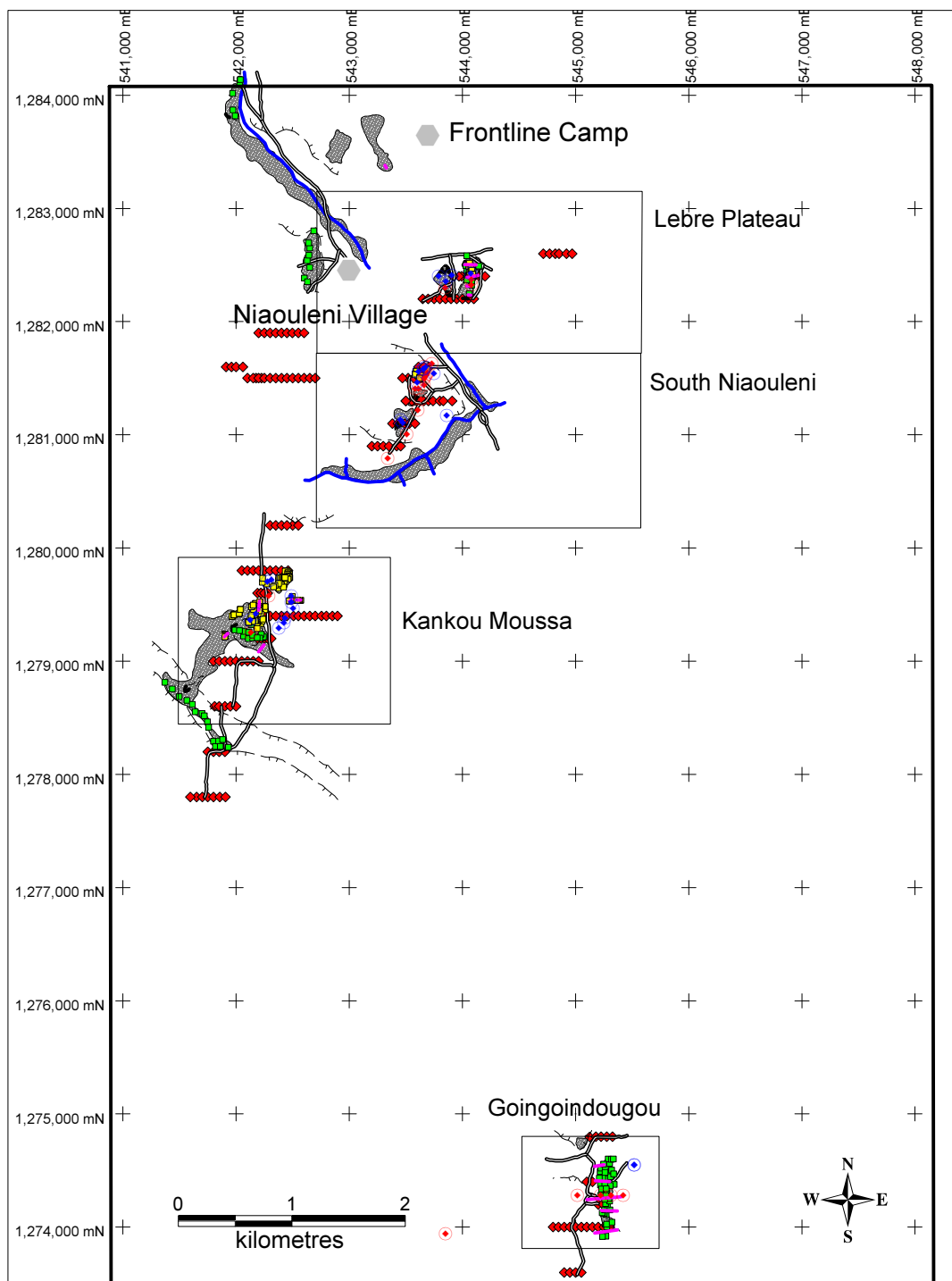
Vegetation is rare except in the river valleys and is more usually savannah-type. The numerous lateritic plateaux are often bare of significant vegetation, with a sparse grass covering during the wet season. Large trees are found close to the drainage. Seasonal marshes occur in the stream valleys, and certain types of soil cover become very slippery in the wet season and can cause vehicles to be bogged down.

Ample space is available on the property for mining operations, leach pads, processing facilities, tailings facilities and waste disposal areas. Power would be readily available from the Selingue hydroelectric station. Various streams and rivers on the property flow year round, which could provide ample water to support mining operations.

3.4. HISTORY AND PREVIOUS WORK

The Niaouléni zone is one of the oldest sites of artisanal working in Mali, with recorded activity dating back to the fourteenth century. Since the 1960s, the property has been included in regional exploration programmes conducted by public companies and in more focused exploration by private companies. Artisanal activity has continued throughout this period. The following summarises the reported regional and local company activity. Figure 3 is a compilation map of historical work showing the major areas described in the text below. More detailed plans of individual areas are shown in Figures 11, 13, 15 and 17 displayed in section 5.

The reader should note that Howe considers all of the historical resource and reserve estimates reported herein to be non-compliant with Canadian National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101) and as such they should not be relied upon.



LEGEND

- | | | | | | |
|--|--------------------|--|------------------------------------|--|-------------------|
| | SAPROLITE BOUNDARY | | DRILL HOLE 93-RC | | ORPAILLAGE EXTENT |
| | EXCAVATION | | DRILL HOLE DDH-97 | | PERMIT BOUNDARY |
| | PLATEAU MARGINS | | PIT AND CHIP SAMPLES | | AREA OUTLINE |
| | TRENCHES | | GRAB SAMPLES-2010 | | |
| | DRAINAGE | | DRILL HOLE RAB-2010 | | |
| | ROADS | | NIAOULENI VILLAGE / FRONTLINE CAMP | | |

FIGURE 3: COMPILATION MAP SHOWING OLD AND NEW WORKINGS: DEGUEFARAKOLÉ PERMIT, MALI.

3.4.1. WORK PRIOR TO 2007

- **1960-1967: SONAREM** (Societe National de Recherche et d'Exploitation Miniere) with Soviet cooperation identified 60 gold anomalous zones within the Kangaba district, and evaluated placer deposits along several rivers in the area. Zones of gold mineralisation were also located, related to north-trending shear zones with quartz veins within the Banankoro and Kobada orpaillage sites which respectively lie 10 km north-northwest and 5km north of Niaouléni. An evaluation of alluvial gold reserve of Tomono and Fagoula rivers was completed. This reserve was estimated at 580 kg of gold.
- **1960-1970: DNGM** (National Department of Geology and Mines) with the help of expatriate geological consultants conducted several exploration and geological mapping programmes in the area.
- **1978: Syndicat Or**, a joint venture between DNGM, the French Government organisation BRGM (Bureau de Recherche Géologique et Minière) and MINERSA SA conducted trenching and pitting to the south of Banakoro over the shear-zone identified by SONAREM. Quartz veins and stockworks were associated with gold grades up to 3.6 g/t Au within saprolitised schist averaging 1.0 g/t Au.
- **1988: UNDP and DNGM** estimated the gold reserves along 29.5 km of the Niger River and along the Fie River which lie 5 km to the east and 3 to 5 km west of the property respectively. The principal drainage on the property flows west to the Fie River. The Fie River was estimated to contain some 6.25 tonnes of gold along its course.
- **1990: Mink Mineral Resources (Mink) and DNGM** conducted reconnaissance geological surveys in the area and identified 10 significant areas of artisanal operations, two of which were on the current Niaouléni property.
- **1991: as Le Groupe Mink Lepine (GML)**, Mink acquired the Niaouléni Property, measuring 383.6 km² in area, which was granted through a Convention d'Etablissement between the Mali Government and GML dated 11 November 1991 and Arrêté No. 91-5963 MMHE/CAB dated 31 December 1991. This included the current concession, but extended to the north and west to the Niger River.
- **1991: Mink-Lepine** completed a Landsat imagery interpretation of the Kangaba district and identified seven areas that merited follow-up surveys. Mink conducted reconnaissance surveys, comprising mapping and geochemistry in those high priority zones that coincided with known artisanal activity, including the Lebre Plateau and Niaouléni South on the current project area. Significant gold anomalies were identified.
- **1992: Mink and DNGM** conducted more detailed soil geochemical surveys in and around both ancient and active areas of artisanal mining on the Lebre Plateau, Niaouléni North and South on the current licence and on six other areas of interest to the north and west of the property. 180 samples were collected and further targets identified.
- **1993: Mink and Viceroy Resource Corporation** of Vancouver, British Columbia, entered an option agreement, whereby Viceroy could earn a 70% participating interest in the 383.6 km² Niaouléni Property by expending CAD\$2.8 million on the property and, under a separate agreement, could participate for up to 40% interest in a mechanised placer operation by paying proportionate costs. The joint venture completed a topographic survey at 1/20,000 scale, drilled 21 reverse circulation (RC) holes totalling 2,053m distributed between artisanal sites at Lebre Plateau, Niaouléni South, Kankou Moussa and Goingoindougou, all of which lie within the current permit. GML conducted preliminary geological exploration on the Property. GML and Viceroy collectively spent a total of 462,555,287 F CFA towards the project during the initial exploration phase. After completing its requirements for the first three (3) years, GML

relinquished 291.1km² of the permit area to the State in compliance with the terms of the Convention and the Mining Code.

- **Viceroy** conducted VLF-EM surveys on the Lebre Plateau and Niaouléni South.
- **1994: Viceroy** conducted a VLF-EM geophysical survey and a soil geochemical survey on a 50 by 50 m grid over Lebre Plateau, Niaouléni South and Kankou Moussa. They also excavated a series of pits totalling 331m in depth at Lebre Plateau and Kankou Moussa, followed by 420m of RC drilling on Lebre Plateau and Niaouléni South. In December 1994, the Company submitted an Application for the First Renewal of the Exploration Permit in order to continue work in the 92.5 km² area which forms the current Niaouléni Property.
- **1995: Mink** conducted pitting on the Lebre Plateau and Goingoindougou zones and excavated 301m of trenches. Four trenches ranging from 3 to 6 m deep were excavated on the 200m by 400m Lebre Plateau artisanal mining area. Trench sampling indicated visible free gold, which caused assay problems due to nugget effects. The company decided to collect larger samples in future work. At this time, Viceroy had expended sufficient cash to hold a 51% interest in the property.
- **1996: The Mink-Viceroy JV** conducted a VLF-EM and ground magnetic survey over the Goingoindougou zone on a 25 by 5m grid. Four strong anomalies were identified, three of which coincided with the principal zone of artisanal mining, while one was some 500m to the west. The magnetic surveys suggested that mineralisation coincides with highs; an offset to the east was suggested in the north of the mining area.
- Four 9 m deep trenches and one 2m deep trench were excavated totalling 485m in length on the Goingoindougou zone. Channel samples indicated significant gold values and panel samples were collected along the stockworks, aggregating about 100 tonnes for concentration at the company's on site sample preparation laboratory. Three diamond drillholes for a total of 760m were drilled beside the first trench. The core was split and one half was assayed and samples sent to Anamet for metallurgical testwork, petrographic analysis, screen and gold distribution studies. Unfortunately the remaining half, retained for reference purposes was lost when the company eventually pulled out of Mali.
- **Mink** announced the discovery of a major gold-bearing stockwork in the Goingoindougou artisanal mining zone, indicated to be some 200m wide and 1,000m long, open in all directions. Many of the artisanal workings were over 20m deep, terminating at the water table. Mapping, geophysics and geochemistry continued on the Lebre Plateau, South, Central and North Niaouléni and Kankou Moussa.
- **Mink** bought out Viceroy's interest for \$450,000 plus 2,000 ounces of future gold production. Howe is informed by Touba that this agreement lapsed when the licence was eventually withdrawn from Mink.
- **1997:** On behalf of Mink, Aerodat of Canada conducted an airborne geophysical survey over the entire 400 km² concession and identified several significant anomalies, interpreted in the Niaouléni area to indicate deep-seated mineral deposits. A major east-west aeromagnetic anomaly was identified at South Niaouléni, which proved to be a mafic dyke across which the mineralised zone appeared to be offset. The report is not available and the plans reproduced in various reports are of small scale and low resolution. The magnetic plan indicates that the mafic dyke is emplaced along a major feature north of which a lithological change is evident, possibly reflecting more iron-rich laterite. South of the dyke, northwest linear features reflect the stratigraphic trend of the Birimian sediments. The dyke is offset across several northwest-trending structures immediately west of the property boundary. The radiometric map reflects alluvial clay and possibly clay weathering north of the dyke. Total count radiometrics also suggest a lithological change to the east of the known mineralisation, with an increase of counts probably reflecting more argillic formations. There appears to be no significant correlation with potassium anomalous areas, which tend to reflect the alluvium in river channels. Circular features interpreted by Mink to represent intrusive bodies were noted, though their positions cannot be identified on the currently available maps. This is shown in Figure 4.

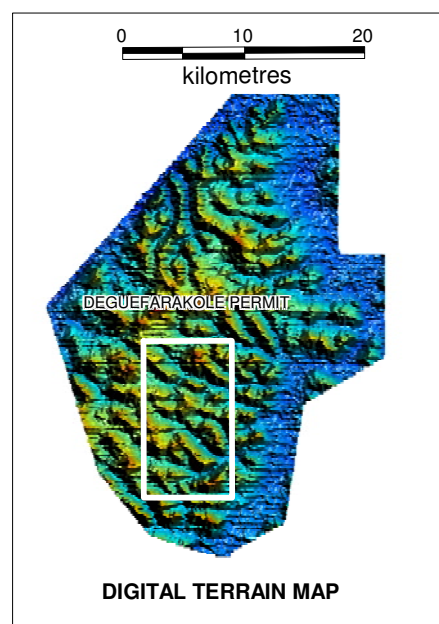
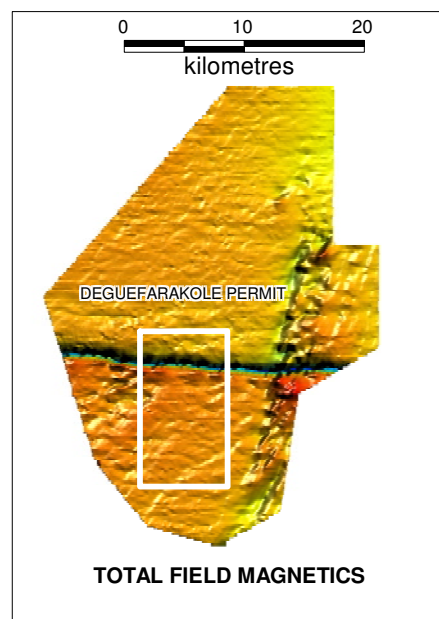
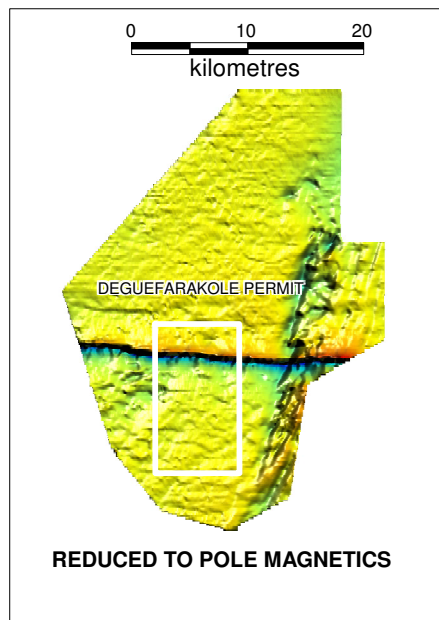


**FIGURE 4: 1997 AIRBORNE GEOPHYSICAL SURVEY RESULTS
(AFTER AERODAT)**

- A ground IP survey was also conducted at Goingoindougou, Kankou Moussa, Niaouleni South and the Lebre Plateau. Five significant chargeability anomalies were reportedly identified at Goingoindougou at interpreted depths varying between 50 to 400m. Two of the anomalies were tested by diamond drilling and intersected quartz veinlets, fractures and pyritisation. Partial interpretation of the Kankou Moussa survey reportedly indicated two significant anomalies some 900 and 500 m long, though it appears from available plans that these were typical arch-shaped features reflecting near surface conductive bodies. The surveys at Niaouleni South and the Lebre Plateau identified numerous weak anomalies interpreted to represent the oxidised and non-oxidised portions of mineralised veining and possible sulphide alteration at depth. No detailed results have been located.
- The same lines were surveyed using VLF-EM and ground magnetics. The results of the surveys are described in a summary report, but plans showing the detailed locations of the various surveys have not been located. Eight north-south conductors were identified at Goingoindougou, two of which were particularly strong and continuous. One measured 1 km in length and coincided with the recent artisanal operations, while the second, 200m to the west, coincided with older workings. A large, weak magnetic anomaly coincided with the northern continuation of the first VLF anomaly. Four weaker magnetic anomalies were identified. At Kankou Moussa, several moderate conductors were identified, but none coincided with the known trends of mineralisation and satellite lineaments. The survey at Niaouleni south failed to identify any significant conductors other than an ancient creek channel in the southeast corner of the surveyed area. The magnetic results were strongly affected by the cuirasse and east-west dyke. At Lebre Plateau, two north-trending, parallel conductive zones, some 360 m apart were identified, one 450m long and the second 500m long. The first reportedly coincided with the edge of the artisanal workings, while the second followed the core of the zone.
- Four diamond drill holes plus one redrill were completed in the Goingoindougou zone and two in the Kankou Moussa zone to test the artisanal workings. One drill hole tested an IP anomaly at Goingoindougou and other IP anomalies were planned. One of the latter anomalies was drilled at Kankou Moussa. A zone of quartz veins and veinlets was intersected at a depth of 100m below surface, though it is not known whether these carried gold values.
- Five 9m deep trenches were excavated at Kankou Moussa and three others were in progress to test extensions to a 100m wide zone of quartz veins and stockworks. An assay laboratory was constructed on site.
- At Goingoindougou, trenching and pitting to a depth of 15m over a north trending area 23m wide by 500m long indicated continuous mineralisation. Drilling beneath the zone indicated its continuation to depth.
- In total, fifteen diamond holes were drilled in the South Niaouleni artisanal mining zone and returned interesting gold values in quartz breccia, including a 7.25m zone averaging 6.48 g/t Au, including a 0.25m quartz vein averaging 154.86 g/t Au, supporting earlier results of 12.76 g/t over 8m and 8.35g/t over 6m in RC drilling. (It is not clear from the data provided whether these were true widths or intercept widths). A test pit intersected a parallel structure 20m to the southwest with significant gold values. Mink's interpretation of the principal quartz veins suggests a series of parallel vein zones that appear to pinch out, anastomose or swell and branch laterally. They also appear to be open at depth and to the north and south. Correlations on available hand-drawn, incomplete drill sections are, however, suspect and the interpretation is considered unreliable.
- 149 Airtrac percussion drill holes aggregating 1,884 m were also drilled on a 100 m grid, over 144 hectares on the Lebre Plateau to test the ground beneath the lateritic cuirasse.
- Up to October 31, 1997, Mink had drilled 3,252m of triple-tubed diamond drillhole distributed between the four main project areas. Total expenditure on the project amounted CAD\$6,385,129, including CAD\$1.6 million to purchase equipment.
- In press releases in November 1997, Mink announced historical 'drill indicated reserves' (non NI 43-101 compliant) of eluvial or oxidised material, estimated to 65m depth in the lode deposits at Niaouleni South. The mineralisation was open ended at depth and laterally. The

historical ‘reserves’ were divided into two sectors, to the north and south of the east-west dyke within structures that could be traced 1,300m north to the Lebre Plateau area and 2,000m southwest into the Kankou Moussa area. These estimates were subsequently amended in 1998.

- Mink believed that waste from artisanal mining at Goingoindougou could provide an additional gold resource.
- Bulk samples from pits at Niaouleni South that were processed by Mink through their on-site facility returned the following selected results from vertical sections:

Test Pit No	Thickness (m)	Average gold grade (g/t)
SNMH 1	5	3.31
SNMH 2	6	0.72
SNMH 2	5	0.71
SNMH 3	13	4.16
SNMH 4	4	0.89
SNMH 8	6	1.34
SNMH 11	4	0.80
SNMH 11	9	0.42
SNMH 11	2	1.10
SNMH 13	2	7.05

TABLE 3. NIAOULENI BULK SAMPLE ASSAYS

- Mink also believed that additional gold resources could be present in alluvial material in five rivers on the current property.
- **1998: Mink** reported the following updated historical ‘reserves’ (non NI 43-101 compliant) on the property based partly on pits, trenches, RC drilling and diamond drilling.

Zone	Category	Type	Average width (m)	Length (m)	Depth (m)	Tonnes	Average grade, Au (g/t)
Lebre Plateau	Probable	Eluvial	200	300	27	79,500	1.44
Niaouleni South (North of the Dyke)	Possible	Quartz veins	3.16	130	65	150,000	5.76
Niaouleni South (South of the Dyke)	Possible	Quartz veins	3.00	60	65	164,000	1.12
Goingoindougou	Probable	Eluvial	20	500	20	300,000	1.37

TABLE 4. MINK NON NI 43-101 COMPLIANT RESERVES

Howe notes that these non NI 43-101 compliant historical ‘reserves’ as reported by Mink cannot be relied upon.

- These figures were based on a more rigorous analysis of drill sections and, in the case of the Lebre Plateau and Niaouleni South, on estimation on hand-drawn level plans of isolated lenses around airtrac holes and the few drill holes, in a broadly north-south array. Mink subsequently completed a pre-feasibility study designed to take the gold project to pre-production in 1998 and into mining by the end of 1999. The objective was the mining of the eluvial/oxide/saprolite

gold mineralisation and the extraction of the alluvial gold resource by hydraulicking. The deeper stockworks and veins underlying the eluvial/oxide/saprolite deposits would be extracted by open-pitting following completion of the hydraulicking operation. Treatment of the ore would utilise gravimetric concentration, as the gold is predominantly coarse.

No further information is available on the Mink operations, which ceased in 1999 when the company failed to raise finance for the next stage of the operation. After a period when there was no activity on the property, the Government withdrew the licence and awarded an Exploration Permit covering the same ground area of 94 km² to Touba in 2002.

- **2002:** On behalf of Touba, **G3 (Bureau d'Ingenieurs Conseils Geant de la Geologie et du Genie SARL)** compiled detailed geological and geomorphological plans at a scale of 1:1000 over an area some 650m by 500m at Goingoindougou. They also reportedly excavated a series of pits along a 520m by 100m north-south-trending zone within this area; any old artisanal pits were utilised if within two to three metres of a proposed pitting site. 16 new pits were excavated and 61 old pits were cleaned and excavated; the depth of the pits varied between 3 and 19 m. The old trenches and pits were located and cleaned up, underground openings were sampled and the waste dumps from the artisanal operations were sampled. A non NI 43-101 compliant resource was estimated to be present to a depth of 20m, in a series of contiguous blocks within the sampling grid and adjacent to the area. As the maps and plans upon which the estimates were based are not available and the estimates cannot be verified, Howe does not consider that they figures should be quoted.
- **G3** also evaluated the potential of the waste dumps left by the artisanal miners in areas of active mining. The rejects from the actual washing of the material contained significant fine gold, indicating considerable losses during the process, but amounted to less than 10% of the total waste from the workings. The wash rejects are concentrated either close to the streams where the material was washed or in small piles scattered throughout the zone of artisanal workings. G3 considered that it might be possible to re-treat the rejects profitably using small wash units.
- **Touba** conducted soil sampling on a 400 by 100 m grid over some 60% of the Exploration Permit, closing to 250 by 100m spacing at Niaouléni. While the absolute positional accuracy of the available data is uncertain, as the available map showing grid positions appears to be an enlarged version of a published map, a number of significant gold anomalies were outlined, both close to the known artisanal workings and in areas with limited or no working. The anomaly at the Lebre Plateau is clearly associated with the mined area, though it appears that the mapped position of the sample lines as compiled by Touba could be two or three hundred metres west of and north of that of the known workings. Significant anomalies occur to the north and northwest of the workings, the latter coinciding reasonably closely with a satellite imagery target identified by Howe. Farther south, anomalies are identified to the west of the workings at Niaouléni South and two high values occur close to known alluvial workings to the east of the eluvial deposit. While it is probable that they are due to alluvial gold in the samples, there is a possibility that the high values represent a gold-bearing structure as they lie close to and on the same trend as a satellite linear and 1200m to the north an isolated value on the same trend lies reasonably close to a mapped quartz vein. The survey did not cover the Kankou Moussa area. In the Goingoindougou area, significant anomalies occur closely coincident with the mapped workings and continue strongly to the south and southwest of the workings, though the line spacing in this area is 400m and correlation between lines is uncertain.
- **2003: M Consulting**, a Malian group, mapped the old workings on a 100 by 50 m grid for Touba. These plans are not available.
- **2004: M Consulting** conducted a study for artisanal production and estimated that 20 tonnes of ore could be produced and processed daily using a small washing plant.
- **2004: Caracal** entered a joint venture agreement with Touba over the west-central part of Exploration Permit and completed a satellite interpretation, conversion of local geographical coordinates to the UTM WGS64 system, and compiled available data (geochemistry,

geophysics and air photos). They concluded that the majority of the gold geochemical anomalies were caused by the mechanical breakdown of quartz, which generated large, unfocussed anomalies that could not readily be traced to the sources with highest potential. They therefore conducted a Mobile Metal Ion (MMI) survey over the Kankou Moussa, Niaouléni South and Lebre Plateau areas to attempt to define the mineralisation axes, which led them to conclude that Kankou Moussa contained the most focused anomalies (Figure 5). Further work indicated only minor gold values in quartz veins, with little indication of dense, coherent stockworks that might support an economic operation. Caracal pulled out of the joint venture in September 2004. Unfortunately only limited information on the work is currently available. Caracal has no residual interest in the Niaouléni Property.

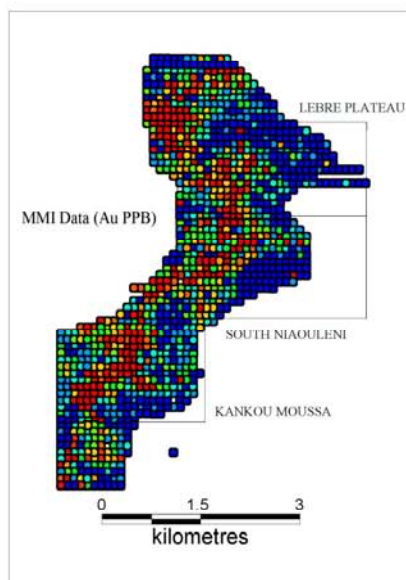
- **2005: African Goldfields** reportedly entered a joint venture with Touba, completing limited VLF-EM surveys and a small drilling programme. Data are not available. African Goldfields has no residual interest in the Exploration Permit.
- **2005: Touba** relinquished 50% of the Exploration Permit area and was granted a new Exploration Permit covering 46 km² over the remaining area on 29th March 2006. They also immediately applied for a new 48 km² Exploration Permit, termed Deguefarakole, which includes the relinquished area, in 2005; this was also granted on 29th March, 2006, and the final ministerial signature (*arrête no.2523*) was issued on September 20th, 2007 and was viewed during Howe's recent visit to Mali.

3.4.2. WORK POST 2007 BY CRYSTAL RIVER RESOURCES

Crystal compiled all available plans and surface data into a GIS database, corrected to UTM WGS84 coordinates. A number of plans and reports could not be located and while positional data of historical mining is uncertain in some areas, drainage and topography are well controlled by the satellite imagery, which is tied to accurate positional information. The Mink surveys tended to be conducted on local grids, which were tied where possible to identifiable topographic features. A few appeared to have been converted to WGS84 coordinates, though these did not appear to be accurate and required field confirmation. Sufficient information was, however available to make a reasonably detailed assessment of the property. Areas requiring more detailed work were delineated, and additional target areas were identified. Additional geochemical surveying by Crystal using hand-held GPS positioning permitted the more accurate location of a number of the earlier surveys.

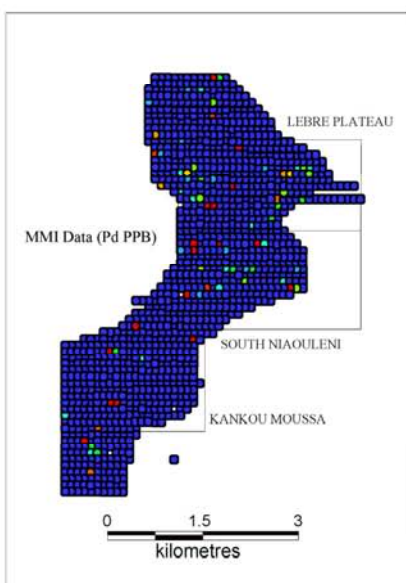
3.4.2.1. HISTORIC DATA COMPILATION

Figure 6 is a compilation of the historical soil geochemistry on the property. The plan also includes the more recent survey coverage by Crystal, which assisted in the accurate location of much of the previous work. The plan also shows areas where artisanal operations have been conducted or are currently active and the currently determined locations of the trenching and diamond drill holes completed by Mink and Viceroy. More detailed plans showing the individual prospect areas, including the Lebre Plateau, Niaouléni North and South, Kankou Moussa and Goingoindougou are shown in section 5-Mineralisation. Goingoindougou is the only area where intense artisanal underground mining is currently active, though eluvial operations from shallow pits are active at Kankou Moussa and Lebre Plateau. Howe's inspection indicated that though mining is severely restricted in areas of thick, hard lateritic cuirasse, the artisanal workers can sink pits through up to 2m of cuirasse. It was also observed that where the cuirasse ends at a scarp, the underlying material is excavated and pits are sunk beneath the cuirasse. This was observed at both Niaouléni South and the newly discovered ancient workings west of Niaouléni village. At Niaouléni South, areas of collapsed cuirasse have also been worked and the edges of the collapse had been excavated to access the underlying material.



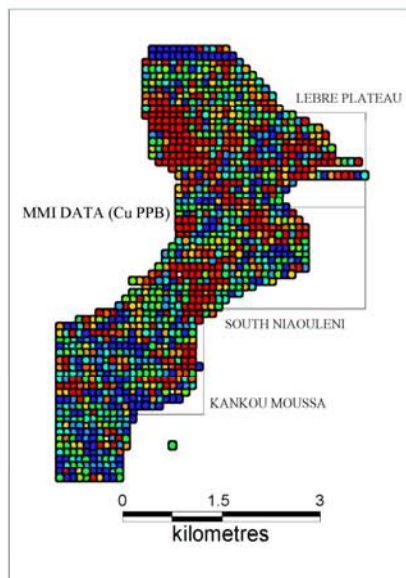
Gold (Au)

1 to 10.5	(183)
0.9 to 1	(33)
0.8 to 0.9	(38)
0.7 to 0.8	(36)
0.6 to 0.7	(86)
0.5 to 0.6	(80)
0.4 to 0.5	(112)
0.3 to 0.4	(131)
0.2 to 0.3	(164)
0 to 0.2	(371)



Palladium (Pd)

0.18 to 2	(17)
0.17 to 0.18	(3)
0.16 to 0.17	(3)
0.15 to 0.16	(3)
0.14 to 0.15	(2)
0.13 to 0.14	(9)
0.12 to 0.13	(10)
0.11 to 0.12	(14)
0.1 to 0.11	(12)
0 to 0.1	(1161)



Copper (Cu)

11 to 175	(275)
10 to 11	(36)
9 to 10	(52)
8 to 9	(61)
7 to 8	(92)
6 to 7	(92)
5 to 6	(139)
4 to 5	(158)
3 to 4	(139)
0 to 3	(190)



FIGURE 5: MMI SAMPLE RESULTS: GOLD, COPPER AND PALLADIUM (PPB)



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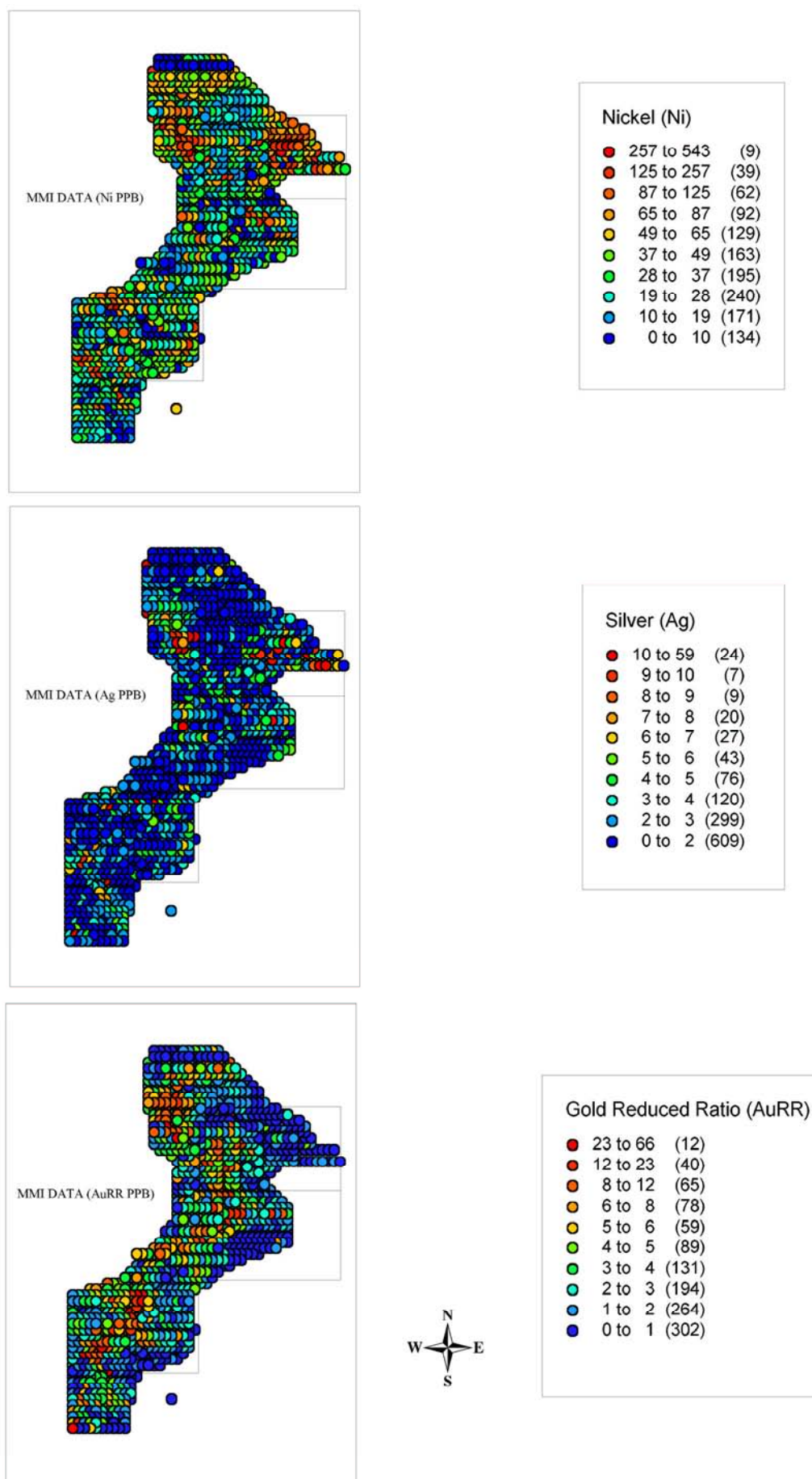


FIGURE 5: MMI SAMPLE RESULTS: NICKEL, SILVER
AND GOLD REDUCED RATIO (PPB)



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3.4.2.2. SATELLITE INTERPRETATION

Crystal conducted an interpretation of ASTER satellite imagery over the property. The lithological units were mapped on the basis of their geomorphic appearance and their expression on the imagery. Only three surface lithologies could be recognised on the imagery.

The principal lithologies discovered in previous drilling are: maroon weathering schists, limonitic greywacke, quartz sericite schist and graphite schist. The mineral assemblage, which is characterised by quartz, sericite, and graphite, appeared to indicate Birimian metasediments with a low metamorphic grade. No evidence of greenstones was identified on the interpretation map.

The interpretation map was essentially a regolith map with additional structural detail; this structural information was gleaned from features that persisted through the deeply weathered crust. Some structural detail was apparent due to a number of factors, which included: vegetation patterns, tonal changes and slight ridges and gullies at the edge of laterite scarps. In addition, as the laterite is of variable thickness, there was a variation in the level of detail that could be observed.

The main structural features identified from the image interpretation are listed below:

Foliation:

- The general foliation trend is north to north-northeast, but it swings to northeast in the northern part of the area.

Fractures & Linears: - The following directions were identified.

- North-south to north-northeast – very close to the foliation trend
- East-west – possibly intruded by mafic dykes
- East-northeast – accompanied by swings in foliation trend, possibly with lateral movement
- Northwest-southeast – this direction controls the drainage pattern

Dykes:

- All segments of dykes mapped trend east-west.

The principal structure observed on the property is a major north-northeast trending fault at Goingoindougou. This trend is coincident with the general trend of the artisanal operations in this area and was also observed as a satellite imagery lineament traversing the Goingoindougou workings. A parallel structure passes through Kankou Moussa and the western part of the Lebre Plateau. The latter is also traversed by strong northwest and north-northwest trending features. A mafic dyke identified by the aeromagnetic survey follows an east-west trend across the Niaouleni South area and appears to offset the mineralisation. Other major lineaments trend north-northwest, northwest and east-northeast. The geochemical maps accompanying Frontline's April 2010 Niaouleni Project Report possibly indicate that north-west to south-east trending structures may be important in this area, and there might be more structures on this trend than originally interpreted. In the original interpretation report it was noted that structures on this trend controlled the main drainage direction.

The study found that north-south or north-northeast trending fractures were important structures in the known zones of interest (e.g. Goingoindougou, Kankou Moussa & Lebre Plateau). There was the possibility of lateral movement (no firm evidence) on east-northeast fractures that may have opened pathways to mineralisation in the north-south, north-northeast fractures, though east-west trending mafic dykes may cut-off mineralised zones.

Therefore it was concluded that the best opportunity for finding undiscovered deposits lies beneath the cuirasse where zones of north-south/north-northeast fractures are intersected by east-northeast structures, with the proviso that east-west dyke-bearing structures may terminate any mineralised zones.

On the basis of the image interpretation and the previous work in the area, five target areas were identified for continuing exploration within the permit area, with a further two outside the concession. These are listed below together with a summary of their criteria. Their location is shown on the interpretation map (Figure 7). The location indicator for targets 1-5 is in the vicinity of the relevant fractures or group of fractures.

Number	Location	Criteria
1	Northwest corner of property	N-S & NNE fractures intersected by ENE structures
2	Northwest Niaouléni-Lebre Plateau	N-S & NNE fractures intersected by ENE structures
3	West Goingoindougou	N-S & NNE fractures intersected by ENE structures
4	Southwest corner of property	Minor circular geomorphic feature
5	South of Goingoindougou	N-S & NNE fractures intersected by ENE structures
6	Off property to the northwest	N-S & NNE fractures intersected by ENE structures
7	Off property to the southwest	Minor circular geomorphic feature

TABLE 5. SUMMARY OF TARGET AREAS

Frontline requested that Howe re-examined the imagery in the light of the most recent geochemical data. The original image data and the MapInfo layers generated during the interpretation three years previously were re-interpreted. The main drainage direction is northwest to southeast, and it is possible to pick additional fracture traces with this trend.

The re-interpretation concluded that the permit area can be divided into three domains based on fracture density, comprising a northwest domain and a southeast domain separated by east-northeast trending fractures which define an intervening low-density zone. There is a good relationship between fracture directions and gold values that could be enhanced by more discriminatory contouring of the geochemical maps. The northwesterly and westerly fractures that have coincident gold values warrant testing.

Examination of the target areas following the latest soil and RAB work is described in section 6.3.1.

3.4.3. SOIL GEOCHEMISTRY CONDUCTED BY CRYSTAL

Figure 6 shows the location and results of the soil surveying conducted by Crystal subsequent to Howe's initial visit. Howe had recommended that the previous work should be accurately located using modern survey methods, as gross positional uncertainties were noted when the original data was compiled and compared with Howe's GPS positions.

A total of 2,233 samples were collected on a 40 by 100m grid during three one month-long periods designed to meet expenditure requirements to maintain the permits. The survey was accurately located by GPS positioning tied to readily identifiable features which permitted the accurate relocation of previous workings and surveys. Samples were collected at 50cm depth in areas of soil/laterite cover, and where cuirasse (hardcap) was present, samples were collected from surface after cleaning. The samples were sieved on site until 500 gm of material less than 80 mesh was accumulated. Touba employees conducted the surveys, which were supervised by a geologist. The samples were submitted to ALS-Chemex in Bamako, an ISO 17025 (Africa) and ISO 9001:2000 accredited laboratory.

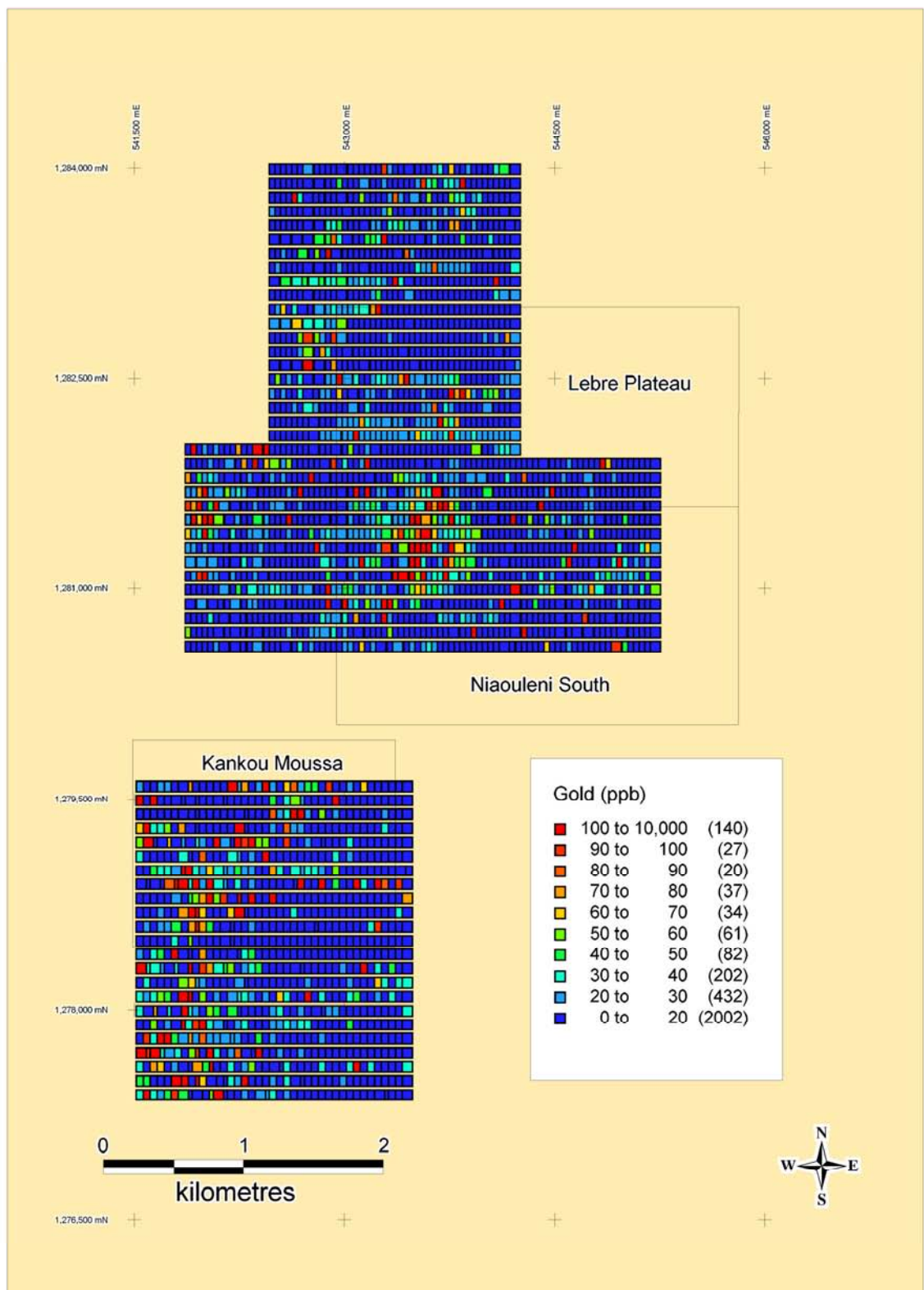
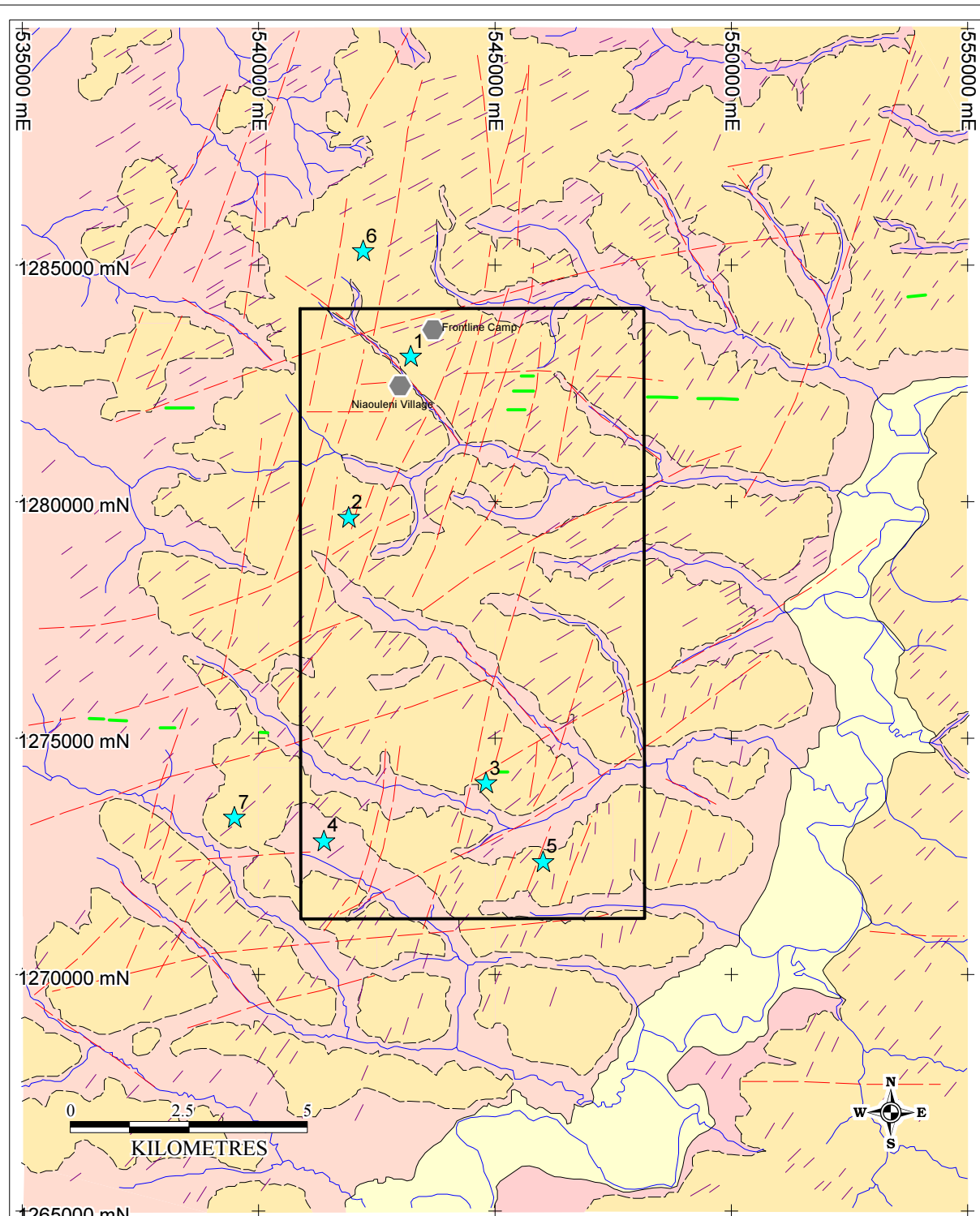


FIGURE 6: SOIL SURVEY BY CRYSTAL RIVER RESOURCES, 2007.



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LEGEND

- GEOLOGICAL BOUNDARY OBSERVED
- GEOLOGICAL BOUNDARY INFERRED
- FAULT INFERRED
- TRACE OF FOLIATION
- DYKE, COMPOSITION UNKNOWN
- DRAINAGE

- NIAOULENI VILLAGE / FRONTLINE CAMP
- PERMIT BOUNDARY
- TARGET AREA (NUMBER REFERS TO REPORT)
- QUATERNARY - RECENT ALLUVIUM
- QUATERNARY-LATERITISED SURFACE
- BIRIMIAN SAPROLITIC-METASEDIMENTS

FIGURE 7: SATELLITE INTERPRETATION

Analysis of samples was carried out using fire assay with atomic absorption finish on pulverised cuts of 50 gm, with a detection limit of 3 ppb.

Howe examined the assay certificates for this work and found that the results were accurately plotted and reflected the distribution of the above-background values accurately, enabling the identification of discrete zones of elevated gold value that confirmed previous work.

The work concentrated on the Niaouleni South area, where Howe's field inspection had identified artisanal workings. This area was also tested by Mink with several drill holes. The results showed a strong anomaly, some 300m wide associated with the artisanal workings, previous pitting, and the area drilled by Mink. This confirmed the findings of previous surveys in this area. The work also tended to reflect the MMI work conducted by Caracal. A few minor anomalies to the west of the main trend were considered by Howe to merit field examination.

Included in the surveys were a few termite mound samples, which clearly reflected the soil sample results. These were sampled using composites of a series of samples collected on two orthogonal vertical lines across the mounds; these were coned and quartered to provide a 1 to 1.5 kg sample for assay and the samples were prepared and assayed as per the soil samples.

4. GEOLOGICAL SETTING

4.1. REGIONAL GEOLOGY

The Niaouleni Property is situated in the western part of Mali, and is underlain by rocks of the Archaean to Lower Proterozoic Birimian Group, which form part of the West African Craton. Exposure on the property is poor due to the covering of lateritic soils and cuirasse (Figure 8).

The Birimian of West Africa is subdivided into three series:

- The **Mako Series**, which comprises interstratified volcanic rocks including basalts and andesites, and pyroclastic sediments comprising tuffs, greywackes and schists and argillites.
- The **Diale Series**, which is a flyschoid melange comprising metasedimentary schists, greywackes and graphitic schists. The lower part of the formation consists of dolomitic marbles succeeded by interbedded greywackes, sandstones and pelitic rocks.
- The **Dalema Series** which comprises metaconglomerates, greywackes, quartzites and schists and is characterised by the well-known tourmaline sandstones that form important hosts to gold mineralisation in the Kenieba area of western Mali.

The Niaouleni area is underlain by probable Diale Series flyschoid metasedimentary rocks.

4.2. PROPERTY GEOLOGY

Figure 9 shows the geology of the property. In the artisanal workings the near-surface geology accessed by the trenches and pits comprises a reddish brown hard lateritic cuirasse ranging in thickness from a few centimetres to 9 metres. Frontline is currently preparing a series of geomorphological maps that record the surficial deposits which will assist the detailed interpretation of the soil sampling. The cuirasse is composed of iron oxide pisoliths, with or without silicified, subangular pebbles: at Goingindougou, the cuirasse has the appearance of a hard, iron cemented conglomerate. The material is cemented by concretionary goethite and haematite and can effectively prevent the local miners from accessing underlying mineralised zones. Elsewhere, the cuirasse may be represented by a mélange of rock fragments, pisoliths and haematitic and goethite concretions, weakly cemented by clay and iron oxide.

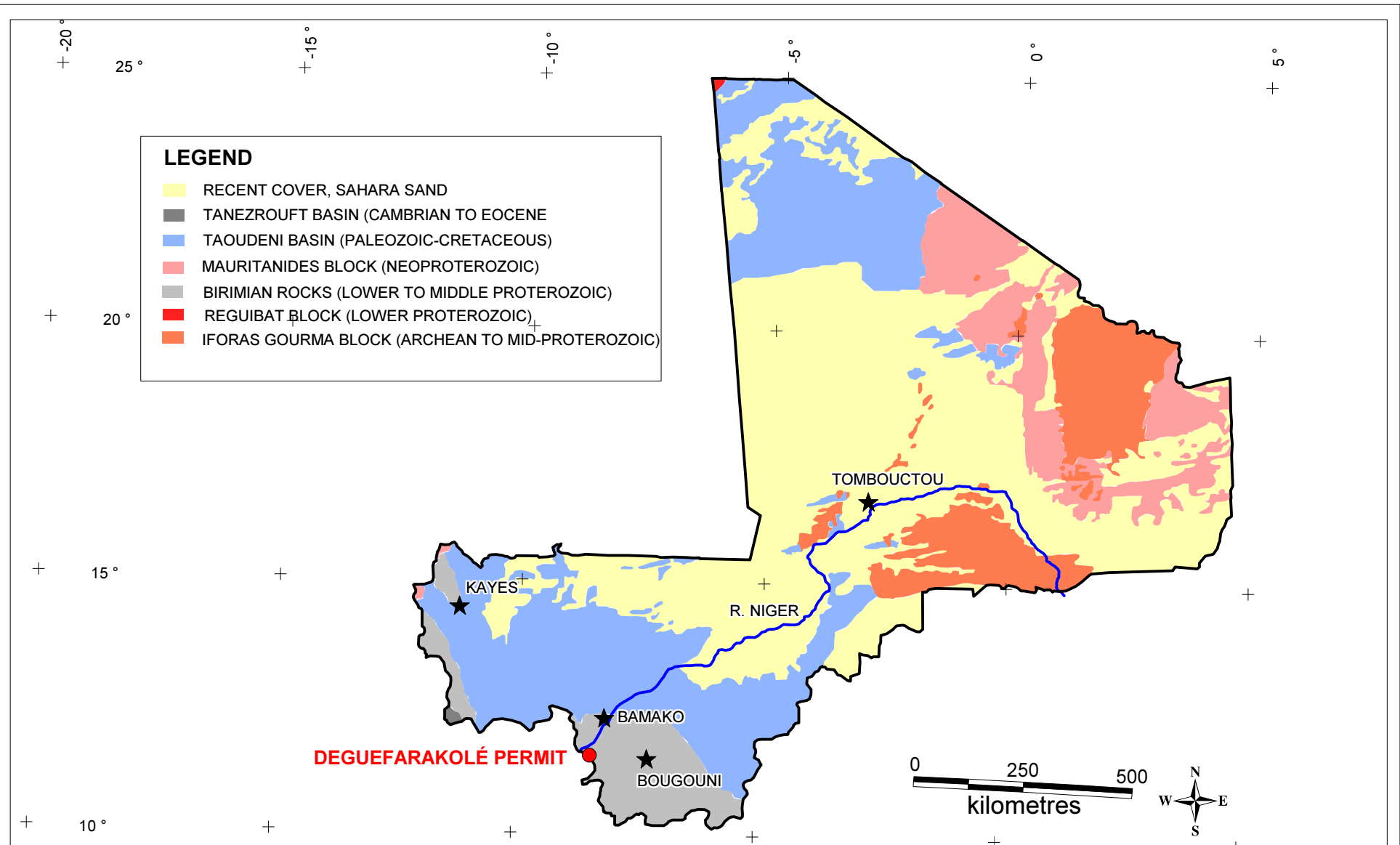
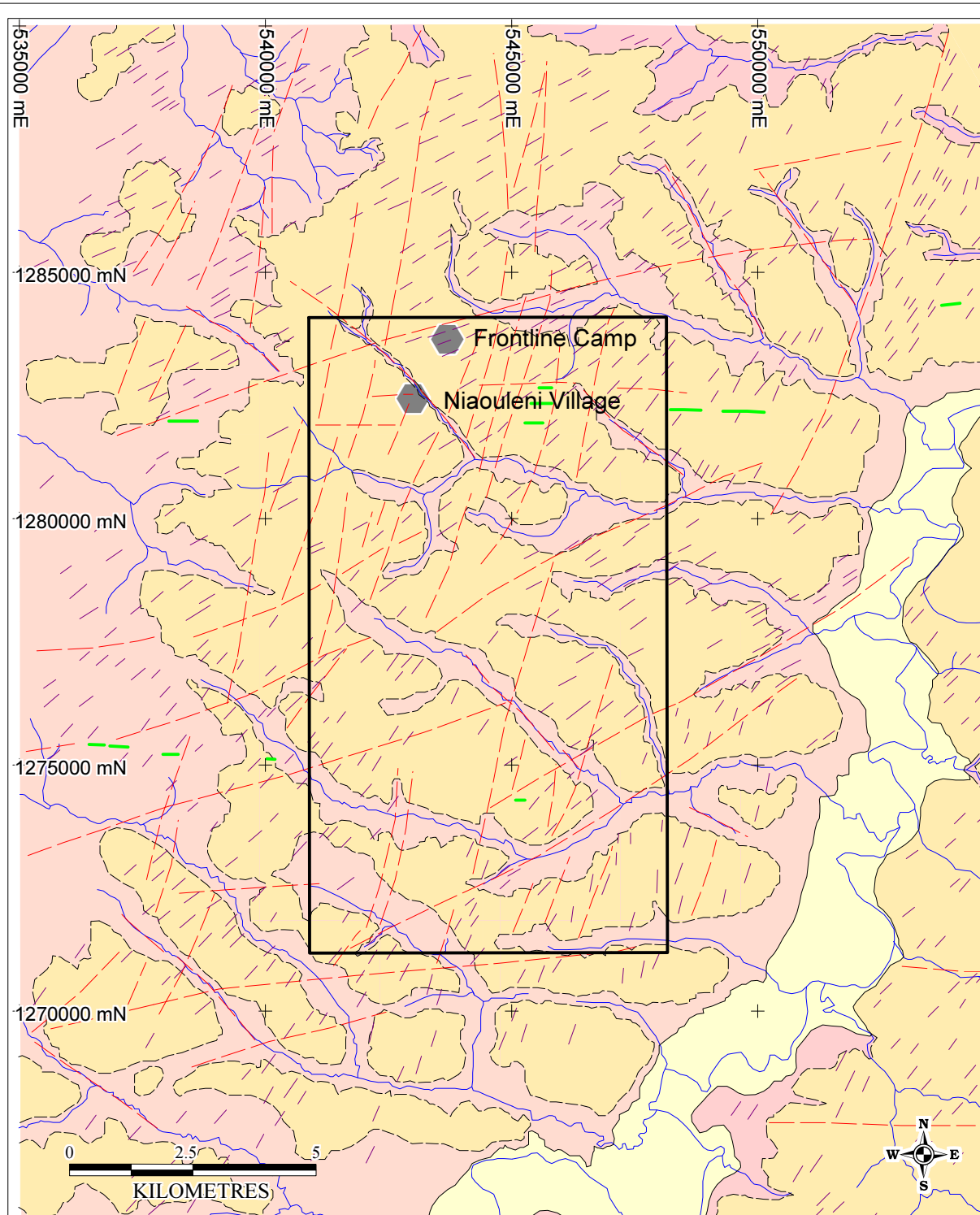


FIGURE 8: REGIONAL GEOLOGICAL MAP



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LEGEND

	GEOLOGICAL BOUNDARY OBSERVED		NIAOULENI VILLAGE / FRONTLINE CAMP
	GEOLOGICAL BOUNDARY INFERRED		PERMIT BOUNDARY
	FAULT INFERRED		QUATERNARY - RECENT ALLUVIUM
	TRACE OF FOLIATION		QUATERNARY-LATERITISED SURFACE
	DYKE, COMPOSITION UNKNOWN		BIRIMIAN SAPROLITIC-METASEDIMENTS
	DRAINAGE		

FIGURE 9: LOCAL GEOLOGY FROM SATELLITE INTERPRETATION

Beneath the cuirasse a red to pink grey laterite is intermixed with saprolitic patches forming a transition zone to saprolitised Birimian rocks.

The saprolite consists of decomposed, kaolinised or clayey Birimian metasediments that include thinly foliated (approximately 2 mm thick) schistose units, unfoliated metagreywacke and medium to coarse-grained metasandstone. Certain pinkish-grey calcareous grit units in the saprolite zone, ranging from five to 10 cm thick, are competent and not kaolinised. The saprolites can be classified into three major groups, distinguished by their respective colours as follows:

- Purely kaolinised and sericitised white to milky white;
- Grey to pinkish-grey; and
- Yellow to brownish-yellow.

The colour differences in the saprolite probably reflect different precursor rock types, which have been altered both by intense tropical weathering and probably by hydrothermal fluids associated with the mineralisation. The drilling conducted to date has shown that the saprolitisation and alteration extends to at least 150 m depth. The most common alteration type is kaolinisation and sericitisation.

Quartz stockworks of varying intensity and density are observed in all of the three groups in the trenches at Goingoindougou, Kankou Moussa, Niaouleni South and the Lebre Plateau. Quartz veins and veinlets which strike due north and/or north 20° east and dip 45° to 70° southeast are intensely developed in the third group. The majority of quartz veins and veinlets occur in the stockworks; most are one to ten centimetres thick. Laterally continuous, flat lying quartz veins and veinlets also occur within the stockworks. Two quartz veins measuring around one metre have been identified, one at Goingoindougou and the other at Kankou Moussa. The veins are usually confined to the saprolites but occasionally some penetrate into the overlying cuirasse.

The principal structure observed on the property is a major north-northeast trending fault zone exposed in trenches at Goingoindougou. This trend is coincident with the general trend of the artisanal operations in this area and is also observed as a zone of satellite imagery lineaments paralleling the Goingoindougou workings. A parallel structure also passes through Kankou Moussa and the western part of the Lebre Plateau. Niaouleni South, Kankou Moussa and the Lebre Plateau are also traversed by strong northwest and north-northwest trending lineaments. Mink also interpreted a northwest-trending breccia zone traversing the mineralised zone at Kankou Moussa.

A mafic dyke identified by the aeromagnetic survey, follows an east-west trend across the Niaouleni South area and appears to offset the mineralisation. Other major lineaments trend north-northwest, northwest and east-northeast. The northwest lineaments appear to represent late structures as they control the drainage, but there is also indication from Frontline's recent work that they may be mineralised, possibly remobilised from the earlier northerly-trending phase of mineralisation. A felsic dyke with a northeasterly trend is reported in RAB drill chips and is exposed in an adjacent artisanal pit to the east of Lebre Plateau.

In the southwest corner of the area, the satellite imagery has identified a circular geomorphological feature. The recent geochemical surveys by Frontline indicate linear zones that may be radial to this structure.

The known mineralisation at Goingoindougou appears to terminate to the north against a cross-cutting east-west feature. It may be offset to the east some 1.2 km, where a discrete zone of gold anomalies occurs. A west-northwest feature is also suggested by linear termite anomalies to terminate the latter zone and 5 km farther northwest to terminate the Kankou Moussa mineralisation. Frontline geologists tentatively interpret this feature as a fault that has offset the Kankou Moussa-Niaouleni South trend to the east for 5km, though there is little evidence on the satellite imagery for a fault of such magnitude.

Parallel-trending features identified on the satellite imagery are also interpreted to form the boundary between Kankou Moussa and Nialouléni South; the latter appears to be offset some 500m east from the main Kankou Moussa trend. A further 900m north, a strong northwest-trending fault with limited lateral movement traverses the Nialouléni South zone and appears to be mineralised. A discontinuous zone of termite anomalies parallel to the western property boundary follow a zone of north-northeast trending fractures that, in the north, are intersected by northeast-trending fractures that have coincident linear termite and soil anomalies.

4.2.1. DEPOSIT TYPES

Deposit types on the property include shear-hosted quartz vein, stringer and stockwork gold mineralisation hosted by Birimian metasediments, eluvial gold deposits in laterite and saprolite above shears and alluvial deposits in the drainage channels on the property. Gold is observed as fine grains within iron-stained quartz, associated with pyrite and magnetite and haematite indicative of the oxide zone. Angular gold nuggets are frequently observed in the eluvial and alluvial deposits,

5. MINERALISATION

In situ saprolite and eluvial gold deposits have been mined on the Nialouléni property for many years. During the 1992-95 exploration by Mink, some remnants of an eluvial gold deposit were reportedly observed in pillars exposed along caved mining galleries at the Lebre Plateau zone, but these were very limited.

Subsequent trenching by Mink permitted the sampling and testing of all the various rock types. The results demonstrated that all material contained gold in varying amounts. However, the yellow to yellowish-brown saprolite group was found to contain the strongest concentrations of gold and also hosted the most intense stockworks. The yellow colour may reflect limonitisation or an intense jarosite alteration and kaolinisation event.

The gold mineralisation in the property is characterised by nuggets and fine visible gold. A large percentage of gold observed in the miners' washing equipment and concentrates obtained from mini-bulk samples by Mink was platy and angular, suggesting that it is very close to source, typical of saprolitic eluvial deposits elsewhere. All of the quartz veins, quartz breccias and stockwork systems exposed in trenching and pitting, and particularly the yellow saprolite carry gold and appear to represent the surface expression of deeper sources. The gold is frequently found intergrown with pyrite and magnetite and haematite. Limonite-stained quartz frequently contains gold. The artisanal miners liberate the gold by crushing the material in basic wooden mortars with wooden pestles prior to washing the material.

Mink experienced considerable problems in assaying the material due to an extreme nugget effect which was solved by collecting large samples (panel samples in trenches averaging 70 kg), concentrating the samples in a small plant and using a total fusion assay method.

The lateral and depth continuity of the quartz-rich zones at Nialouléni has been established in trenching, pitting, and is indicated in the limited shallow drilling completed to date, though no systematic drilling of the mineralised zones has been conducted to determine the geometry of the deeper mineralisation.

There is also a considerable amount of alluvial gold in the numerous streams and rivers traversing the property. The gold occurs as smooth, rounded nuggets and grains, indicative of alluvial transport. Two types of alluvial deposits occur on the property. The first occurs as palaeoplacers in ancient river terraces and preserved meanders and old river channels. The gold occurs in fine, clayey gravels overlying coarser, clay-poor gravels, as seen on the Lebre Plateau. The second type occurs in recent stream gravels and flood plains, particularly close to Nialouléni village.

Near in situ eluvial mineralisation has been identified on the property in the Lebre Plateau, just north of Niaouleni village, to the west of Niaouleni village Lebre Plateau, in the Niaouleni South area, at Goingoindougou and Kankou Moussa. In addition, numerous alluvial workings have been, or are currently active on the property.

During the dry season, artisanal mining is currently conducted in the Goingoindougou and Kankou Moussa areas, while more limited near-surface activities are conducted at Goingoindougou, Kankou Moussa and Lebre Plateau during the rainy season. Niaouleni South is an old alluvial/ eluvial working site but is currently inactive. The other three sites are eluvial, and in Goingoindougou there is also indication that in situ quartz veining has been accessed in the deepest workings. The most active site is Goingoindougou. The overall dimensions of the artisanal workings as recently determined by Frontline geologists are:

- Lebre Plateau: 2,000 m by 1,800 m
- Niaouleni Sud 1,500 m by 1,000 m
- Goingoindougou 350 m by 900 m
- Kankou Moussa 1,100 m by 1,300 m

(Figure 2)

5.1. LEBRE PLATEAU

Figure 10 shows the areas of artisanal mining, Mink/Viceroy pit sampling and Mink trenching and diamond and RC drilling on the Lebre Plateau. The more recent work by Frontline is shown on Figure 11.

The principal artisanal operations shown on Mink's diagrams had concentrated on a north-northeast-trending zone some 400m long and 100m wide. 100m farther south a second zone about 180m long continued in this trend, but also extended along a narrower zone some 100m to the northwest. Three smaller north-northeast-trending areas had been worked: one just west of the axis of the principal trend in the gap between the two major working areas, a second small zone has been worked about 170m to the east of the major working and the third area lies some 300m west of the principal, northern working. The two worked trends reflect major lineaments seen on the satellite imagery. Mink reported a 20 to 25m wide stockwork zone in the principal workings. Mink's drilling was directed to the northwest, across the trend of the artisanal working, suggesting that they considered that the principal quartz vein trend was oblique to the artisanal operations, and was actually parallel to satellite imagery lineaments in this area.

The Caracal MMI surveys showed a strong north-easterly trending anomaly in this area. The Caracal work also indicated a strong anomaly about 1.5 km to the northwest of the known mineralisation, which does not appear to have been followed up, but which coincides with a significant zone of termite mound and soil anomalies identified by Frontline. Two strong, parallel, northeast-trending linear anomalous features about 2.5 km long and 500m apart traverse this zone and the newly discovered ancient orpaillage zones west of Niaouleni village appear to follow more northerly splays from the linear features. It is also noted that extensive alluvial workings occur throughout and upstream of the linear zones.

The Touba soil geochemistry reflected the artisanal working area on the Lebre Plateau. A strong anomaly occurred to the northeast of the worked area, on a slightly elevated area above artisanal alluvial workings. An isolated anomaly to the east of the workings coincided reasonably closely with a mapped quartz vein and an east-west structure; it also lay 1 km to the northeast of two anomalies along the trend of structural satellite linears, though the latter anomalies were close to alluvial workings and could be due to alluvial gold.

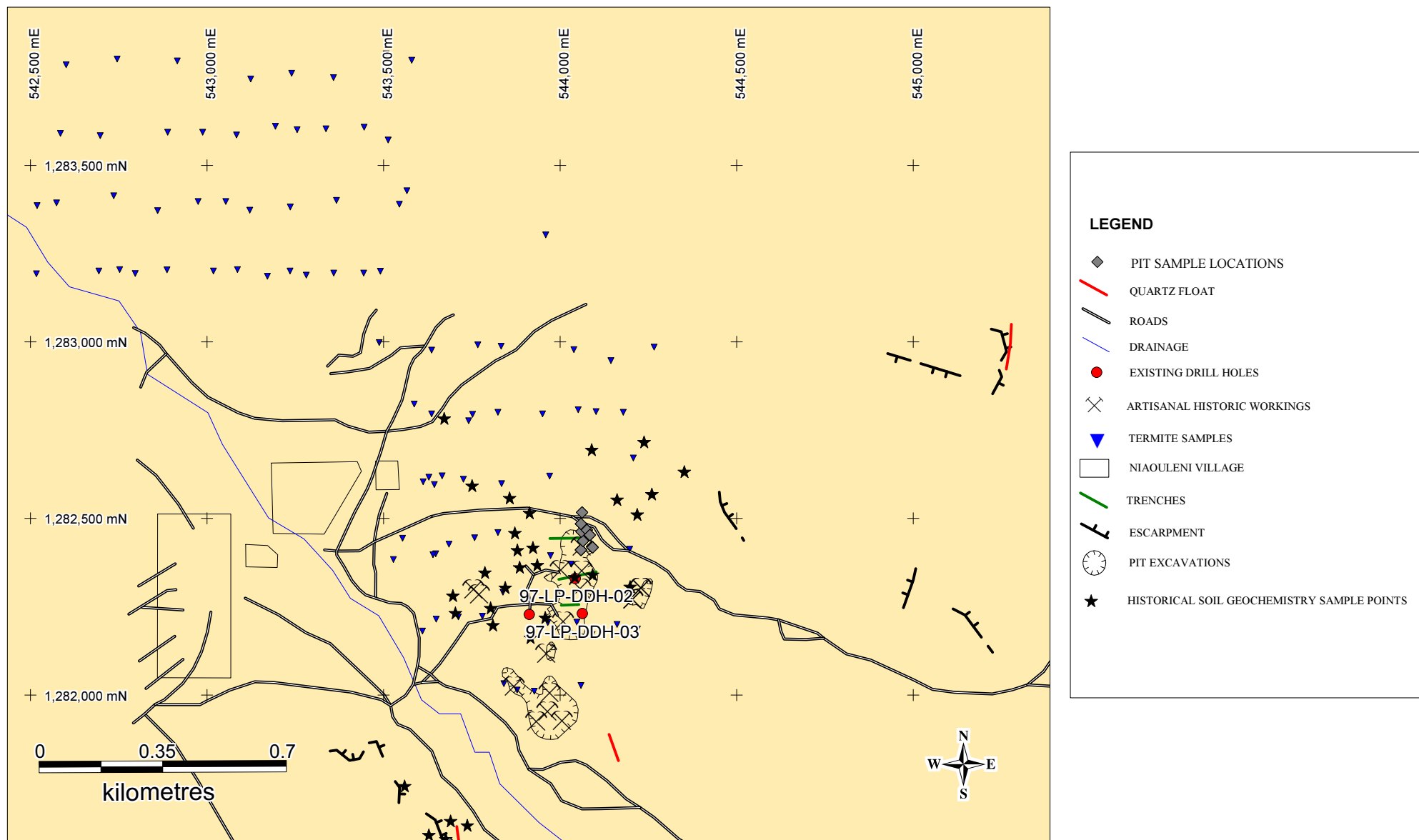


FIGURE 10: COMPILATION MAP OF PRE-2007 ARTISANAL WORKINGS: LOBRE PLATEAU

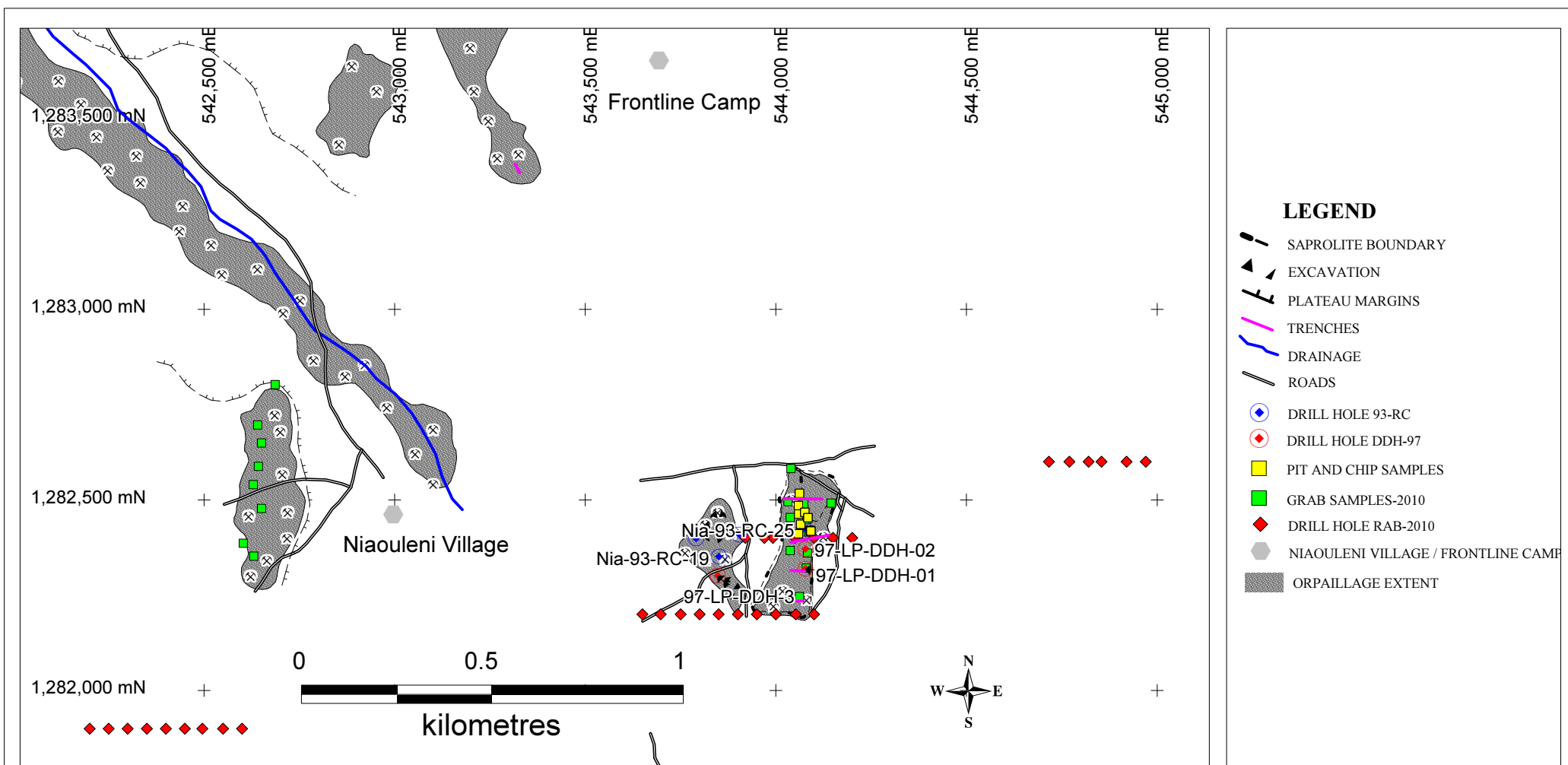


Figure 11: Frontline Mapping of Artisanal Workings: Lebre Plateau, 2010

Howe's field inspection found that the deposit area is a flat, lateritic plateau with little relief to disperse eluvial mineralisation from veins by gravity. The Mink pitting and drilling results indicated a series of lensoid bodies in the eluvial deposits, strongly concentrated along a northerly trend, but extending to the west and east, presumably reflecting mobilisation from the source structures and deposition in response to fluctuations in the water table level, which can rise to within a metre of surface during the rainy season. There is also an element of structural control, with northeast and northwest trends evident in level plans constructed by Mink for resource estimation purposes. Mink's drilling was directed variously to the west, east and northeast and appeared to concentrate on the area to the west of the artisanal operations.

The Frontline RAB drilling was orientated to the west. Most of the holes on the southernmost line intersected old galleries at depth and several returned visible gold. Quartz veining was intersected in four holes towards the edges of the artisanal workings; a northeast trend is indicated.

5.2. NIAOULENI EAST

A line of RAB holes was sited to investigate this area based on a single point soil anomaly of 5.3 g/t Au. Steep northerly-trending quartz veining is partially exposed in a shallow orpailleur pit close to the section at the contact between metasediments and possible felsic rocks. One of the RAB holes (RA-N-10-130) returned a value of 5.85 g/t Au over 2 metres within a saprolitised, kaolinitised felsic dyke: the hole was collared about 100m east of the anomalous soil sample and the intercept was some 90 m east of the anomaly at a depth of about 30m. It is not possible to estimate the true width of this intersection. The mineralised intercept lies close to a series of north-northeasterly-trending fractures.

5.3. NIAOULENI WEST

This recently discovered area of ancient artisanal eluvial workings is situated in wooded plateaus some 1.3 km west of Lebre Plateau, on either side of a wide, shallow river valley that has extensive alluvial workings. The main areas are some 500m apart and are aligned along a north-northeast trend.

The southernmost area is 500m long and some 150m wide. Numerous old pits, many with large trees growing out of them, occur within the cuirasse and heavily vegetated waste piles are seen. At the eastern edge of the plateau, extensive excavations beneath the cuirasse contain pits that are sunk to access deeper material. Frontline has conducted soil sampling in this area which shows a significant anomaly immediately to the east of the zone on the edge of the lateritic plateau. The Caracal MMI survey also exhibits a strong, coherent, coincident anomaly.

The northernmost area comprises two zones of working. The westernmost is on the direct continuation of the southern anomaly and is 260m long and 150 m wide. The second follows a north-northwest trend and is some 500m long and up to 200m wide. There are several coincident soil anomalies and MMI anomalies form a large coherent zone of similar magnitude to the Lebre Plateau anomaly. This area warrants follow up work.

5.4. NIAOULENI SOUTH

Figures 12 and 13 show the interpreted geology and mineralisation at Niaouleni, south and north of an east-west mafic dyke that traverses the zone. The original Mink diagrams (Figure 12) indicate a series of discontinuous mineralised quartz veins and lenses that were identified along a 900m long, 200m wide, north-northeast trending zone. Artisanal workings included a 150 by 100m zone that reportedly worked three northwest- trending narrow veins to a depth of 15m some 300m south of the dyke. A series of narrower workings are situated on more intense quartz veining to the immediate north and south of the dyke. Howe observed that the workings appeared to be limited on the north by a hard lateritic carapace, which becomes more friable and easier to work farther south. Alluvial deposits have been worked in drainage channels to the southeast of the zone.

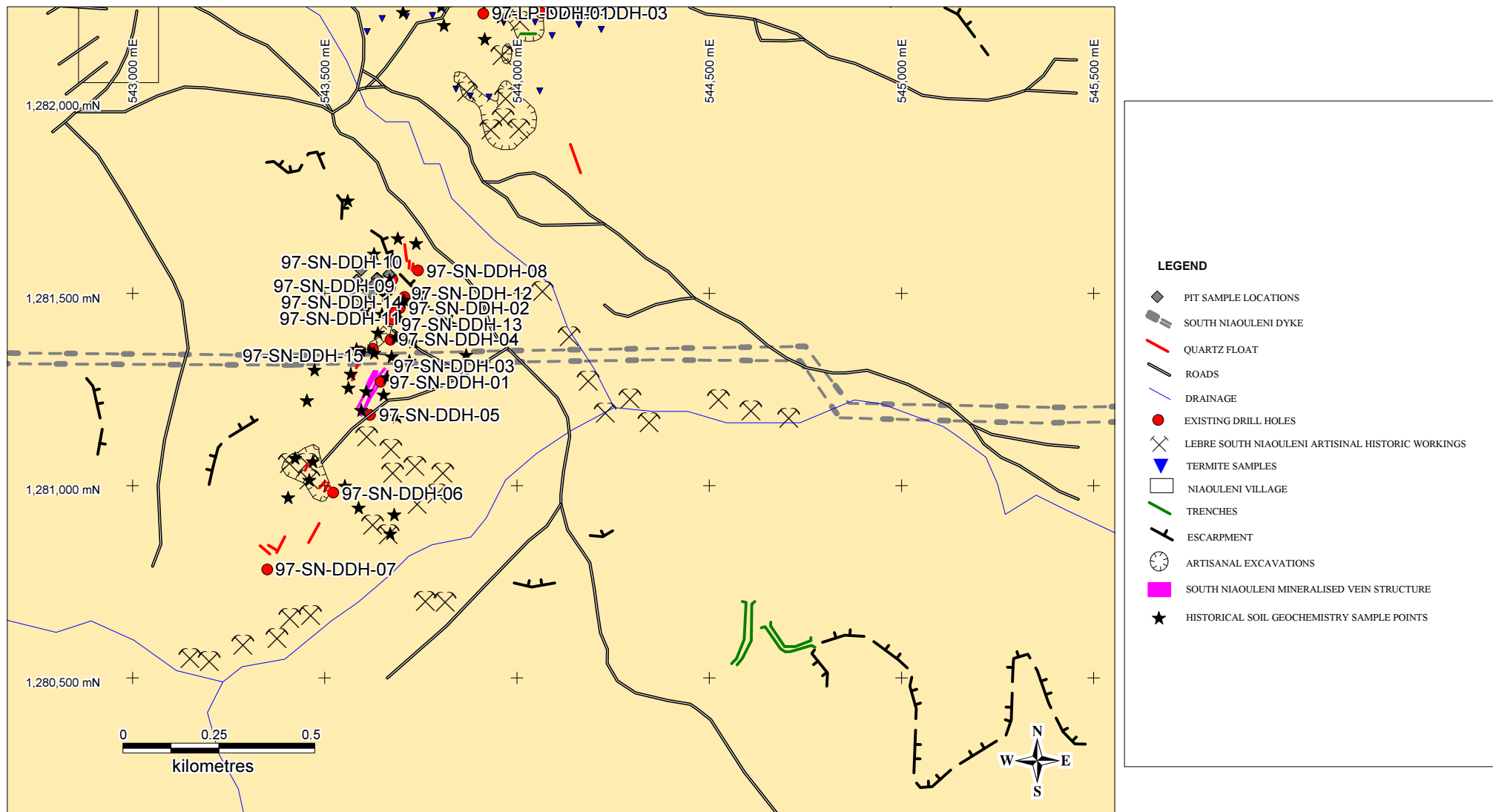
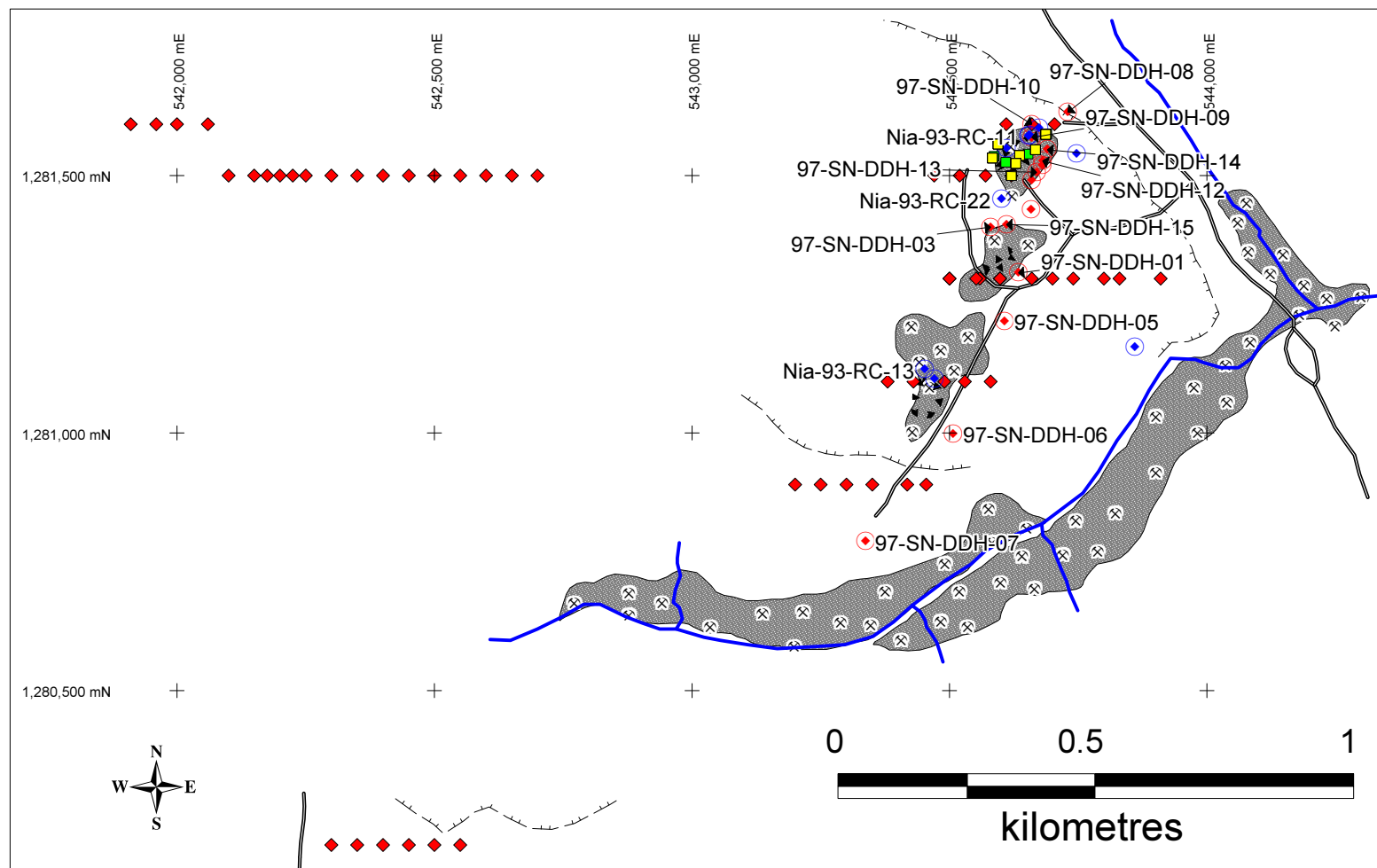


FIGURE 12: COMPILATION MAP OF PRE-2007 ARTISANAL WORKINGS: NIAOULENI



LEGEND

- ▲ EXCAVATION
- PLATEAU MARGINS
- TRENCHES
- DRAINAGE
- ROADS
- DRILL HOLE 93-RC
- DRILL HOLE DDH-97
- PIT AND CHIP SAMPLES
- GRAB SAMPLES-2010
- ◆ DRILL HOLE RAB-2010
- ORPAILLAGE EXTENT

Figure 13: Frontline Mapping of Artisanal Workings: Niaouléni South, 2010

There is insufficient information available to fully determine the geometry of the veins and underlying mineralisation, though the Mink resource estimate diagrams and limited drill sections suggest that a typical saprolite ‘mushroom’ could be developed above the source mineralisation, which appears to be a structurally-controlled vein swarm. The Caracal MMI surveys showed a strong north-easterly trending anomaly in this area which is the southern continuation of the anomaly seen at Lebre Plateau. Drilling by Mink intersected significant mineralisation and abundant visible gold when panning the drill returns, though often with negligible gold values in assaying.

The Mink holes in this area were directed towards the southeast and aligned along an east-northeast trend, suggesting that Mink considered that the mineralised quartz veins had a northwesterly dip and were controlled by fracturing along a more easterly trend than indicated by the trend of artisanal eluvial operations, as at Lebre Plateau. This fracture trend is prominently displayed on the satellite imagery. More recent RAB drilling by Frontline was directed to the west, possibly parallel to the mineralised structures. One RAB hole intersected a gallery about 100m northwest of a Mink RC hole that returned significant gold values.

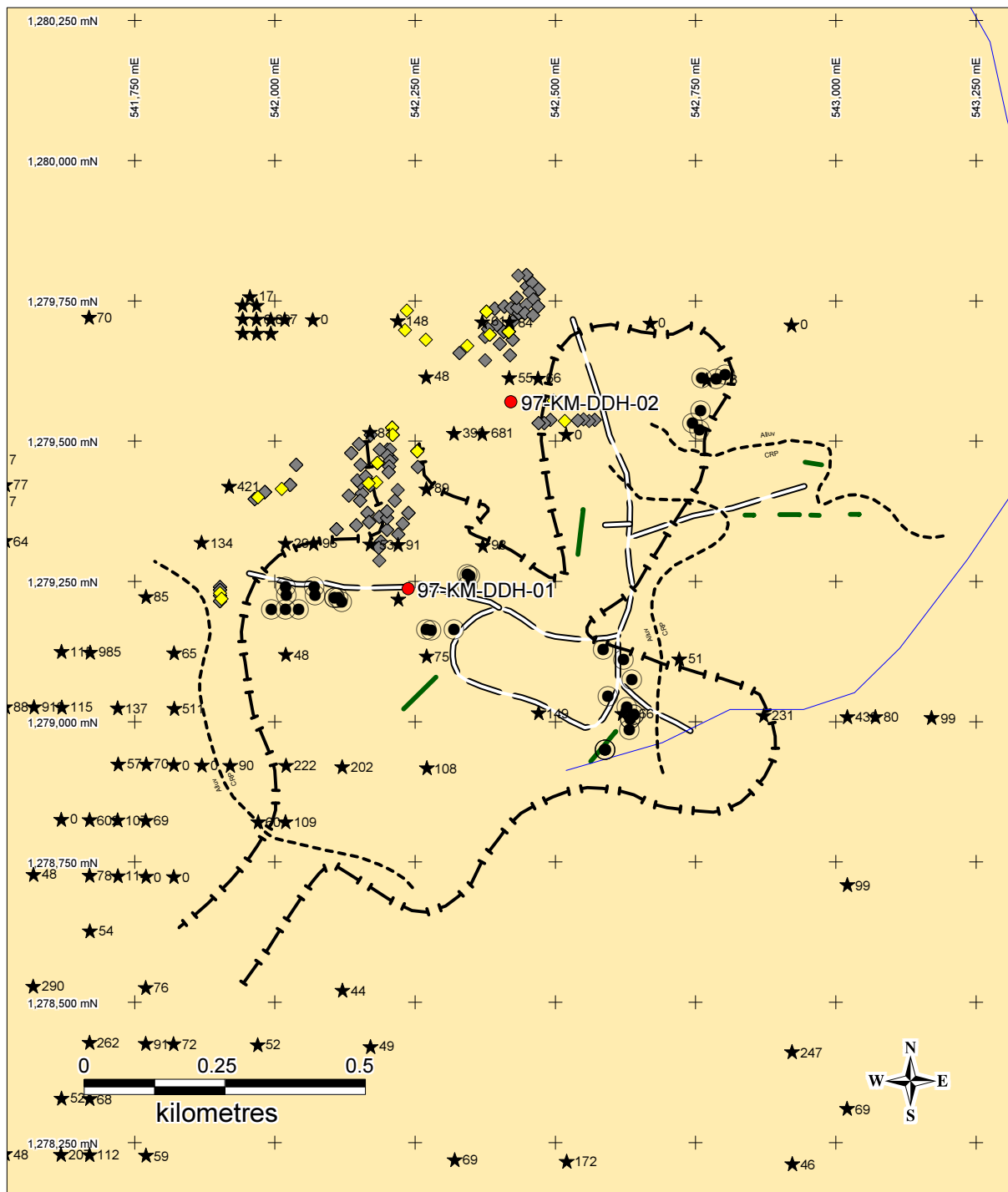
5.5. KANKOU MOUSSA

Figure 14 shows the original Mink plan of the area and Figure 15 shows the recent Frontline mapping of the artisanal operations and summarises work to date on this area. Mink initially mapped the extent of artisanal excavations, which worked two orthogonal stockwork and breccia zones, coincident with satellite lineaments. One zone extended for 1400m in a northeast direction, with a width varying between 100 and 200m. The second was orthogonal to the first and was some 900m long along a west-northwest trend and a width of some 250m. At the intersection the worked zone swelled to several hundred metres wide. Workings appeared to terminate where lateritic hardpan was more intensely developed. Mink’s work also identified a series of IP anomalies coincident with the worked zones. However, assay results were disappointing and Mink decided that the project did not merit further exploration. The area was excluded from the Touba geochemical survey but has been included in the work by Frontline and tested by RAB drilling. Mink’s diamond drilling was directed towards the north within the interpreted northwest-trending stockwork zone and to the northwest on the western flank of the artisanal operations as currently positioned. All but one of Mink’s RC holes were directed towards the east, suggesting a westerly dip to the mineralisation, while Frontline’s RAB holes were directed towards the west, possibly sub-parallel to the mineralisation.

The zone was subsequently investigated by Caracal, who conducted a mobile metal ion (MMI) survey (Figure 5). A strong gold anomaly, offset across a northeast-trending feature was indicated. Pitting results indicated a few strong gold values restricted to individual narrow veins with no indication of a large or coherent stockwork, so the company dropped the project.

While the results appeared to indicate low potential for a significant gold deposit, only near surface areas were investigated within the intensely worked zone. It is possible that the workings exploited a saprolitic ‘mushroom’ above source mineralisation that remains untested. The strength and coherence of the MMI gold anomaly suggests the presence of an underlying linear, northeast-trending zone from which dispersion has occurred into the oxide zone and along the orthogonal, late fault that offsets the mineralisation. It is possible that the late fault carried secondary mineralisation, remobilised from the primary zone that was amenable to artisanal extraction.

Geochemical surveys conducted by Crystal indicated that the mineralisation could continue to the south a further kilometre along a more southerly trend, where it appears to terminate against a northwest-trending feature.



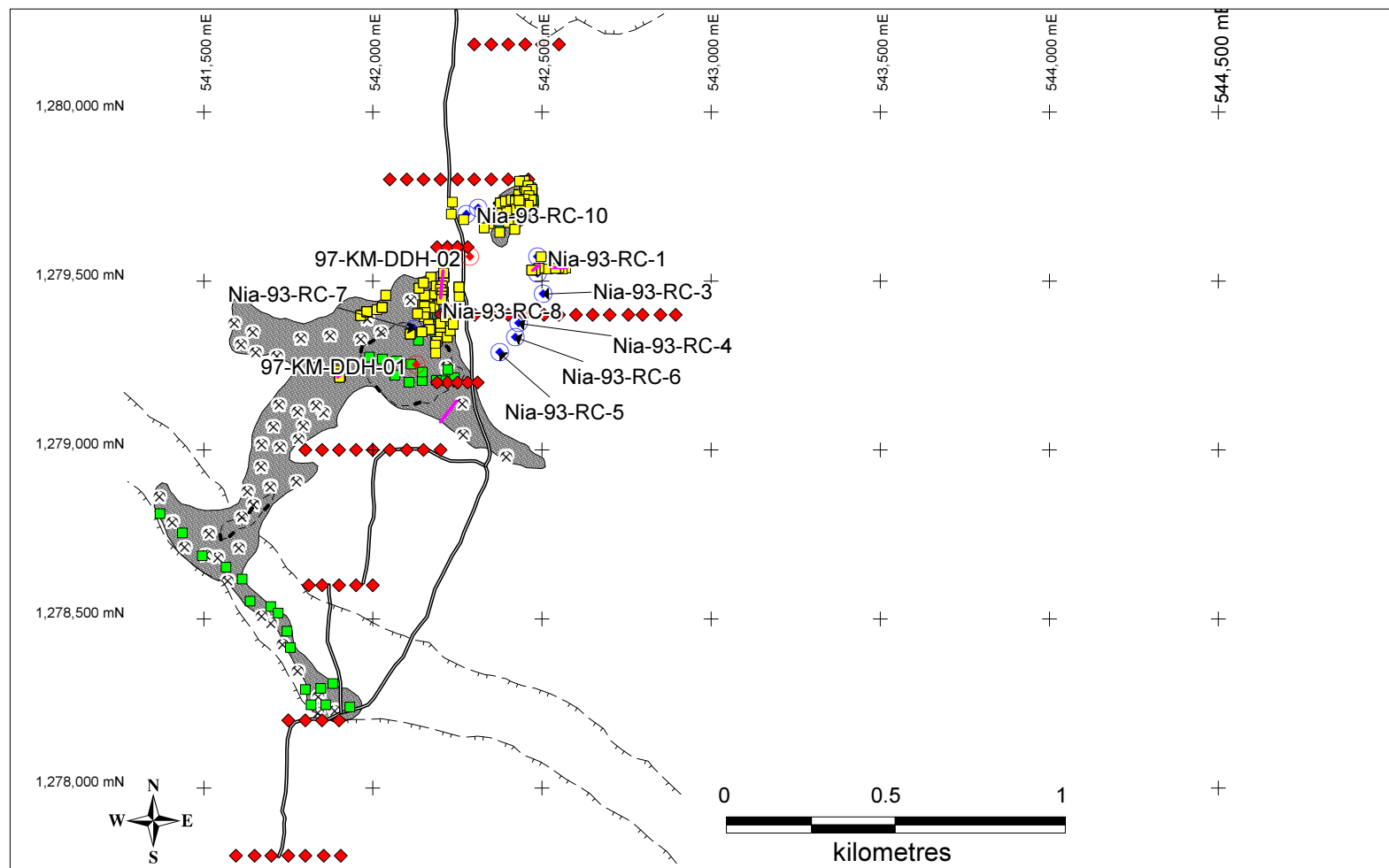
LEGEND

- | | | | |
|--|--|--|---|
| | CHIP SAMPLE LOCATIONS | | KANKOU MOUSSA ACCESS ROADS |
| | PIT SAMPLE LOCATIONS | | KANKOU MOUSSA TRENCH |
| | KANKOU MOUSSA ESCARPMENT | | KANKOU MOUSSA SAMPLE LOCATIONS |
| | DRAINAGE | | HISTORICAL SOIL GEOCHEMISTRY SAMPLE POINTS
VALUES = AU (PPB) |
| | EXISTING DRILL HOLES | | |
| | KANKOU MOUSSA OUTLINE OF HISTORIC WORKINGS | | |

FIGURE 14: COMPILATION MAP OF PRE-2007
ARTISANAL WORKINGS
KANKOU MOUSSA



A C A Howe International Limited



LEGEND

- SAPROLITE BOUNDARY
- EXCAVATION
- PLATEAU MARGINS
- TRENCHES
- DRAINAGE
- ROADS
- DRILL HOLE 93-RC
- DRILL HOLE DDH-97
- PIT AND CHIP SAMPLES
- GRAB SAMPLES-2010
- DRILL HOLE RAB-2010
- ORPAILLAGE EXTENT

Figure 15: Frontline Mapping of Artisanal Workings: Kankou Moussa, 2010

Frontline has conducted a number of RAB traverses across this zone. Several holes on these traverses stopped in quartz and a series of three parallel veins are tentatively interpreted in the western part of the artisanal operations, extending at least 425m in a northerly direction within a 100m wide zone. Visible gold was reported in the westernmost of these veins on two adjacent lines some 200m apart, though assay returns from the holes are low. The interpreted quartz vein zone appears to have been followed by a spur of artisanal working in the northwest corner of the excavated area. The vein zone appears to continue to the northeast a further 450m though it pinches to the north to about 60m and only two veins appear to be present. The westernmost of these can tentatively be continued a further 400 m to the east-northeast, though the correlations are highly speculative in this area. However, the interpreted veins appear to cross Mink's interpreted northwest-trending stockwork zone and would require additional infill drilling to confirm their continuity. Frontline's geochemical surveys suggest a possible continuation to the south, across a 600m wide alluvial plain to a termination a further 600m south against a possible west-northwest structure.

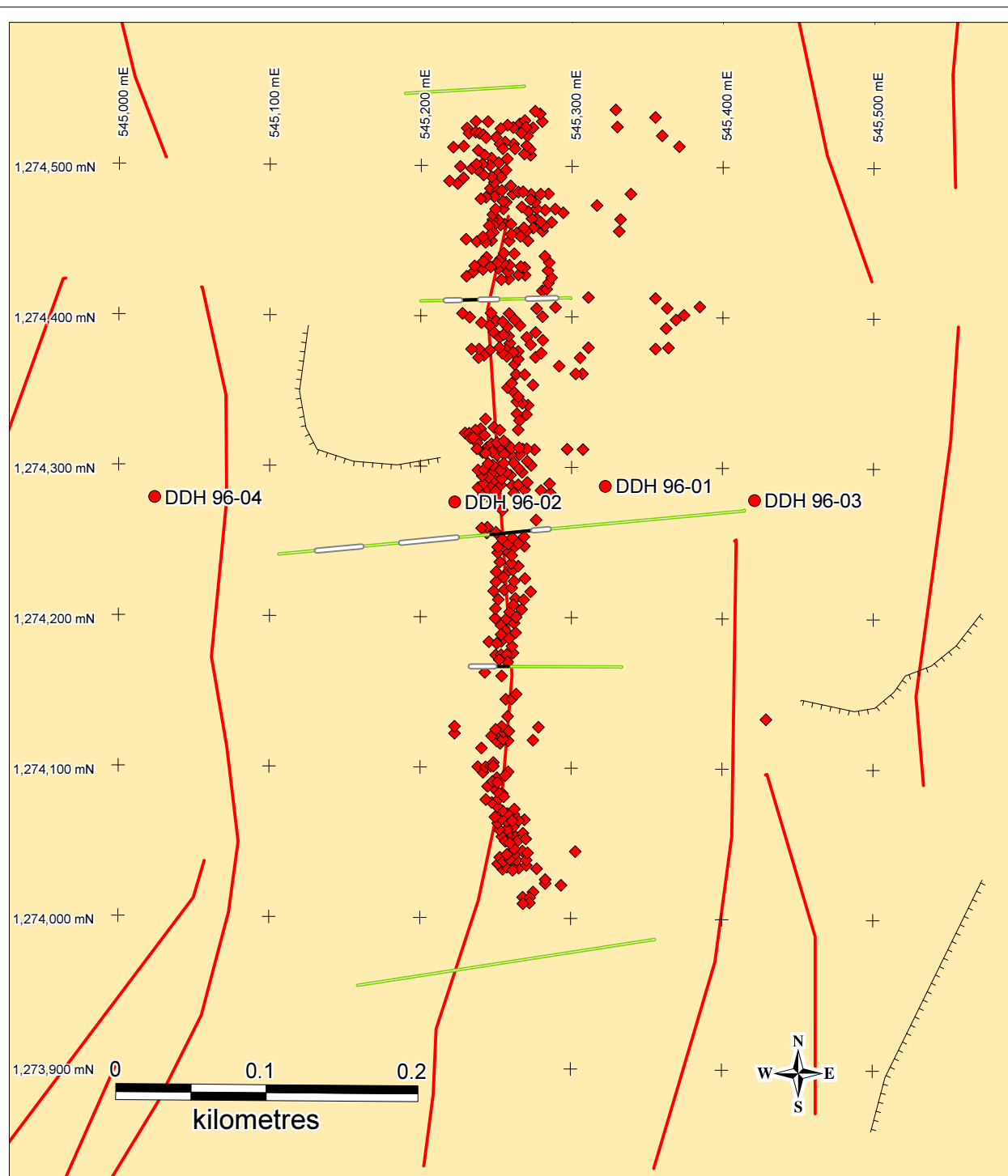
5.6. GOINGOINDOUGOU

This area has been intensively worked in the past by the local miners and is currently being exploited on a large scale. Figure 16 shows the extent of historical workings, the Mink trenches and drill holes and the interpreted mineralisation, which occurs along a 520m long stockwork zone some 60 to 100 m wide. Figure 17 shows Frontline's remapping of the area and recent work. Howe observed that the workings appear to be limited by cuirasse to the north and, to the south, by a near-surface water table on the flanks of a drainage channel. Eluvial workings spread beyond the stock work zone and the worked area covers some 800m by 300 m.

Of the diamond drillholes completed by Mink, three 96-GD-DDH-01, -02, and -03 were drilled across the centre of the artisanal operation. Results are not available for hole -03, but the results from the other two holes show wide intersections down hole. If the intercepts with the highest values are correlated, this would project to surface some 60m west of the orpaillage, but it appears more likely that the intersections represent two near vertical to steep westerly dipping zones. Intense faulting coincides with the intersection in hole 96-GD-DDH-01, which appears to average around 2 g/t over a drilled interval of some 16 metres, and lies near vertically below and slightly west of the zone of intense artisanal mining. The intersection in hole 96-GD-DDH-02, which averages some 2 g/t Au over a drilled intersection length of about 15 metres may project to surface to the west of the artisanal workings, in line with a northwesterly zone of artisanal pitting. It is however noted that there are errors on the log sheets for both holes, with repeated intervals carrying different assays. Core recoveries were poor through most of the mineralised intervals in both holes, so the data cannot be relied upon.

A number of artisanal pits elsewhere along zone appear to follow northwesterly trends, though the overall trend of the workings is north-south. There is also an indication of a swing in the trend of the workings to southeasterly at the southern end of the workings. The only significant intersections on the recent RAB drilling occur on the continuation of this southeasterly trend. It is therefore possible that the mineralisation occurs along a series of en-echelon extensional structures transgressive to the main structural trend.

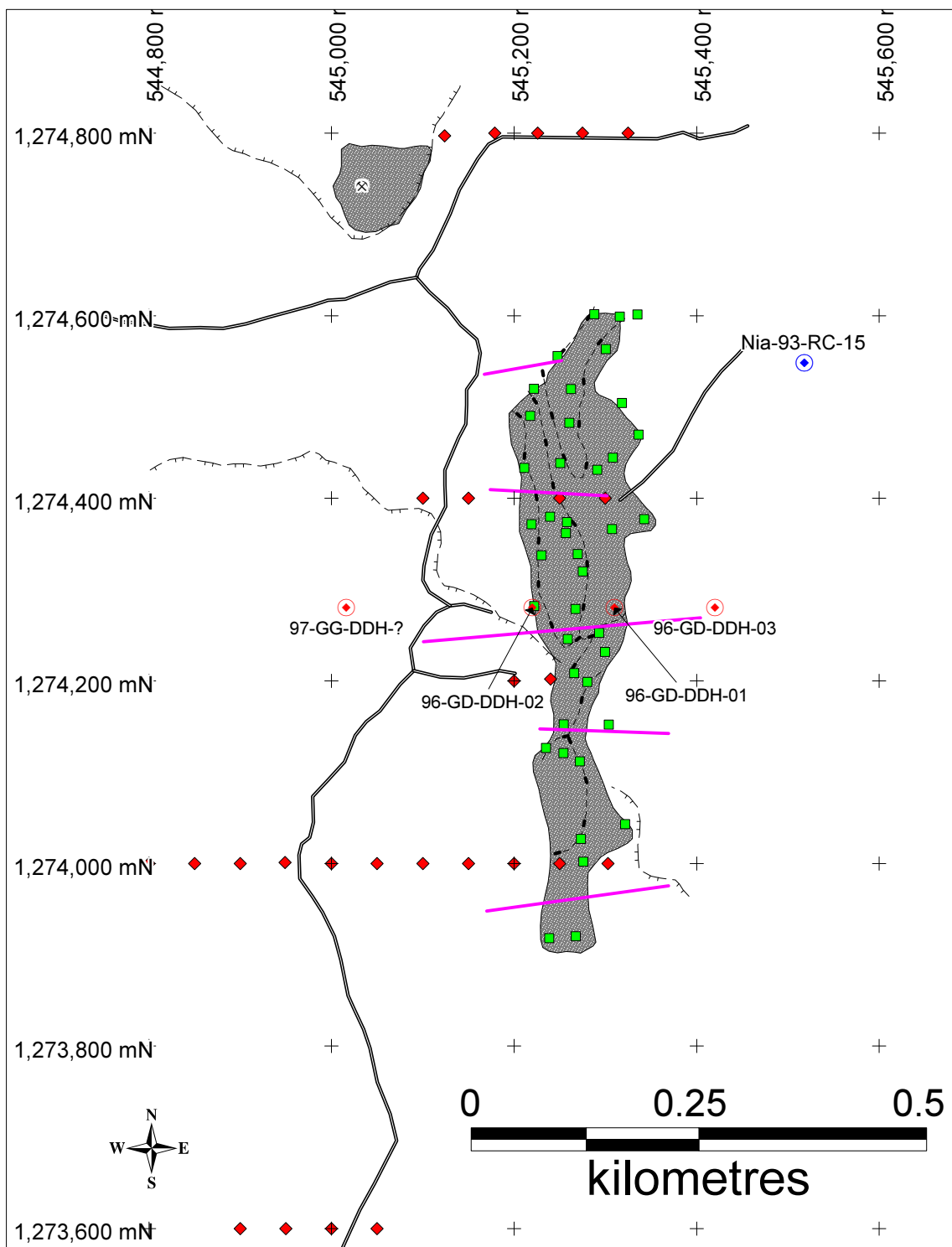
The Mink-Viceroy JV identified four strong VLF anomalies in the prospect, three of which coincided with the principal zone of artisanal mining, while one was some 500m to the west. Magnetic surveys suggested that mineralisation was offset to the east in the north of the mining area. This is also suggested by the recent soil and termite mound sampling conducted by Frontline. Mink subsequently excavated four 9 m deep trenches and one 2m deep trench. In 1997 four additional holes were drilled. Major differences in assay results on duplicate samples were attributed to nugget effects, though average grades returned were low.



LEGEND

- | | | | |
|--|--|--|---------------------------|
| | GOINGOINDOUGOU TRENCH MINERALISED ZONE | | GOINGOINDOUGOU TRENCH |
| | DRAINAGE | | GOINGOINDOUGOU ESCARPMENT |
| | GOINGOINDOUGOU ARTISANAL PITS | | |
| | EXISTING DRILL HOLES | | |
| | GOINGOINDOUGOU VLF EM ANOMALIES | | |

FIGURE 16: COMPILATION MAP OF PRE-2007
ARTISANAL WORKINGS:
GOINGOINDOUGOU



LEGEND

- | | | | | | |
|--|--------------------|--|-------------------|--|----------------------|
| | SAPROLITE BOUNDARY | | DRILL HOLE 93-RC | | ORPAILLAGE EXTENT |
| | PLATEAU MARGINS | | DRILL HOLE DDH-97 | | PIT AND CHIP SAMPLES |
| | TRENCHES | | GRAB SAMPLES-2010 | | DRILL HOLE RAB-2010 |
| | DRAINAGE | | | | |
| | ROADS | | | | |

FIGURE 17: FRONTLINE MAPPING OF ARTISANAL WORKINGS:
GOINGONGDOUGOU, 2010

A geological section of the workings demonstrated a sequence of lateritic cuirasse ranging in thickness from a few centimetres to 9m at surface, succeeded at depth by intermixed laterite and saprolitic transitional to saprolitised Birimian metasediments.

Quartz stockworks of varying intensity and density occur in the trenches at Goingoindougou. Mink announced an indicated resource (not to NI 43-101 standards) of 300,000 tonnes grading 1.31 g/t Au, based on trenching and pitting to a depth of 15m over an area 23m wide by 500m long. Because of problems with early assays, panel and channel samples were composited as mini bulk samples, which were concentrated on site using a knelson concentrator, table and sluice and the concentrates were assayed and grades back-calculated. Drilling beneath the zone indicated its continuation to depth.

The trenches were still open during both Howe visits and could be readily remapped and resampled. A target identified by the satellite interpretation lies some 450m west of the main working, close to an IP anomaly.

Howe collected samples of yellow saprolite, white saprolite and quartz from spoil heaps in the vicinity of the active workings on the initial visit. The samples were analysed at ALS Mali, a subdivision of ALS Chemex, utilising fire assay with 50 gm charges. The yellow saprolite returned a value of 0.12 g/t Au, the white saprolite returned 0.02 g/t Au and the quartz sample returned 0.01 g/t Au. These are not considered by Howe to be representative of the mineralisation, but demonstrate the presence of minor gold enhancement in the saprolite. On the recent visit, a group of women was observed working waste dumps from the artisanal operations and recovering significant amount of fine gold.

Old Touba soil sampling, shown on a recently recovered compilation map, suggested an extension of the mineralisation to the south for a further two kilometres in en echelon, narrow structures, but as the sample lines were 400m apart, correlation is uncertain. The Frontline termite mound sampling, described in detail in section 6.3, indicates that the zone terminates to the north and south against westerly-trending linear features. Strong features with this trend are seen on the magnetic map to the north and south of the artisanal operations. It is possible that the northern continuation of the mineralised zone has been offset to the east some 1.2 km, which is itself terminated by a northwest-trending linear.

6. EXPLORATION BY FRONTLINE

6.1. DATA COMPILATION

Frontline has recently acquired magnetic tapes of historical Mink data which is currently being translated. All data from previous campaigns and current programmes are being compiled into a GIS package in Montreal using GEOSOFT software. This will be available later in the year. The various mistakes noted on the logs viewed by Howe are being rectified, old drill collars are being identified in the field and their positions are being corrected in the database. However, Howe has noted mistakes in the data supplied by Frontline from both Mali and Montreal and recommends that all original hard copy data held in Mali should be checked carefully against the new database. The Howe visit enabled the identification of a number of additional errors in the Mink data originally used as source material in earlier reports; these have now been rectified. However, it is stressed that the additional historical information on magnetic tape recently obtained by Frontline has not been translated to date and is not available to Howe and a full review should be completed prior to final exploration planning.

6.2. GEOCHEMISTRY

Because of the wide diversity of surficial deposit types being classified as soil or hosting termite mounds, Howe has not attempted define anomalous areas using geostatistical parameters but has compared the levels of the geochemical results with those from the known mineralised areas to define

new areas that warrant follow-up. In most cases these newly defined anomalous areas appear as clusters or linear features on several adjacent traverses. Frontline is currently compiling geomorphological plans of the property which, together with the sample descriptions, should enable further refinement of the anomalies.

6.2.1. SOIL SAMPLING

Subsequent to the work by Crystal, Frontline has conducted a comprehensive soil survey over the remainder of the property.

Figure 18 highlights the areas sampled. The sample sites were located by GPS positioning. The work has concentrated on all previously unsampled areas. Areas sampled and results are shown on Figure 18 which also includes the Crystal survey results. The strong regional-scale northeast-trending anomaly identified by the Crystal survey in the Lebre Plateau, Niaouleni South and Kankou Moussa areas has been confirmed and extended to the north and south. This trend includes several areas of historical and current artisanal mining operations. A strong west-northwest trend that crosscuts the northeasterly zone just south of the South Niaouleni area is also indicated.

Frontline's termite and soil sampling at Lebre Plateau has also identified additional anomalies some 800m to the east of the Lebre Plateau zone and a parallel zone of soil anomalies has been identified some 1200m to the northwest of the Lebre Plateau. The latter is coincident with satellite imagery target 1. Neither trend coincides with known workings and may represent previously undiscovered mineralisation. The main Lebre Plateau trend appears to be interrupted immediately to the north, though a weak anomaly may extend a further 400 m to the northeast of the workings.

At Niaouleni South, Frontline's sampling demonstrates the presence of gold anomalism that reflects the trend of the known workings in the area. The data also indicate an extension to the south that terminates against a west-northwest fracture, which carries gold values.

The sampling at Kankou Moussa confirms the known mineralised trends and the zone is indicated to continue, with a possible 200m offset to the west, a further 400m to the northeast. A strongly anomalous gold trend continues a further 1,250m to the south-southeast beyond the known workings.

The previous results over the Goingoindougou artisanal mining area have been confirmed and extended beyond the mining areas to the southwest. However, the mineralised zone appears to terminate to the northeast against a strong west-trending feature which carries intermittent gold values for some 2 km west and 1.5 km to the east. The southern part of the mineralised trend also appears to terminate against a strong east-west feature that also carries gold values for at least 2 km to the west of the northeast trend and that may be associated with a circular feature identified on the satellite imagery. There is also indication of northwest trends that carry isolated gold values on the eastern side of the known mineralisation and to the northeast of the west-trending linear that terminates the known, worked mineralisation. These trends are also confirmed by the termite mound sampling described below.

6.3. TERMITE MOUND SAMPLING

Following the success of earlier termite mound sampling by Crystal, Frontline has now surveyed the major part of the licence area. The results have confirmed the soil sampling trends and identified a number of interesting gold values in the northeast part of the property, where a possible northwest trend is indicated by a number of isolated values ranging up to 12 g/t Au. An anomalous trend is also indicated, extending discontinuously for at least 4 km in a northerly direction from the western part of Kankou Moussa, sub-parallel to the property boundary. The trend is disrupted where it crosses a major drainage some 1.5 km north of Kankou Moussa. The zone converges to the south with the Kankou Moussa zone and continues south for an additional 2 km. In the north the anomalous trend broadens and a series of divergent northeasterly anomalies follows a zone of faulting interpreted from the satellite imagery.

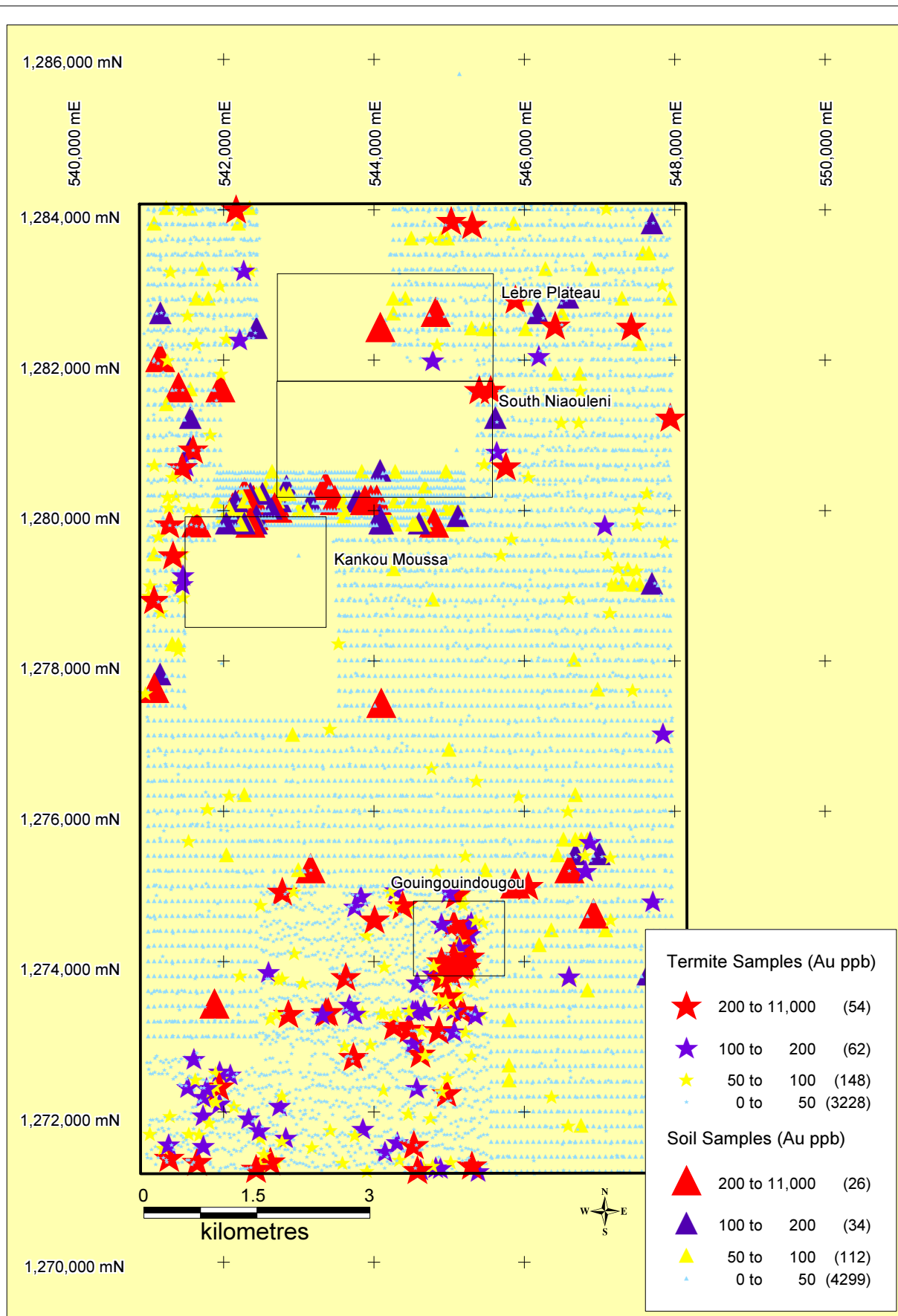


FIGURE 18: FRONTLINE GOLD SOIL AND TERMITE
SAMPLE GEOCHEMISTRY, 2010

The termite geochemistry also suggests the presence of a significant east-west discontinuity at the southern end of the Goingoindougou workings, possibly associated with a concealed intrusive to the west. A further 1.2 km to the south, an east-southeast trending zone of strong termite anomalism some 4km long may also be associated with a radial fracture from the circular feature interpreted from satellite imagery (target 4, Table 8). Examination of the data shows acceptable reproducibility of standards, blanks and duplicates, indicating that these features are real.

6.3.1. SIGNIFICANCE OF GEOCHEMICAL SAMPLING WITH RESPECT TO SATELLITE TARGET AREAS

The following table shows the satellite imagery target areas identified by Crystal; these are now covered by the Frontline geochemical surveys.

Number	Location	Criteria
1	Northwest corner of property	N-S & NNE fractures intersected by ENE structures
2	Northwest Niaouléni-Lebré Plateau	N-S & NNE fractures intersected by ENE structures
3	West Goingoindougou	N-S & NNE fractures intersected by ENE structures
4	Southwest corner of property	Minor circular geomorphic feature
5	South of Goingoindougou	N-S & NNE fractures intersected by ENE structures

TABLE 6. SUMMARY OF SATELLITE IMAGERY TARGET AREAS ON THE NIAOULENI PROPERTY

- Target 1 falls within a strong secondary geochemical anomaly zone that trends northeast parallel to the main Niaouléni/Lebré plateau trend, about 1 km to the northwest. There appears to be a slight offset of the two trends to the northwest along a late northwest fracture.
- Target 2 coincides with the northwesterly fracture that crosses and possibly terminates or offsets the main Kankou Moussa mineralisation at its northern end and is itself possibly mineralised. The target falls within an area of termite mound and soil anomalies to the west of Kankou Moussa.
- Target 3 lies to the west of the main Goingoindougou mineralisation, coincident with a series of termite anomalies and close to an historical soil anomaly.
- Target 4 lies on a strong northwesterly geochemical termite anomaly trend: a second westerly trend of anomalies appears to converge from the east- these trends may indicate radial fracturing associated with a concealed intrusive that is causing the circular topographic feature.
- Target 5 lies on a weak, northwest-trending termite anomaly.

The results essentially confirm the prospectivity of the target areas, all of which warrant additional investigation by geological field inspection and possibly in fill sampling and RAB drilling.

6.4. PIT SAMPLING

Twenty pits in the artisanal workings at have been sampled by Frontline. A total of 20 samples were collected and assayed for gold at ALS laboratory in Bamako. 50% of the samples submitted returned values above 500 ppb. The highest value recorded is 31 ppm. Sample results are shown below and the pits are shown on Figure 3:

NUMBER OF SAMPLES

Pit	Easting	Northing	Sample id	Au (ppb)	Au (ppm)	Location
1	544066	1282281	1457	80		Lebre Plateau
2	544062	1282223	1458	283		Lebre
3	544080	1282396	1459	1465		Lebre
4	544075	1282412	1460	607		Lebre
5	542261	1274300	1461	638		W. Goingoindougou alluvials
6	545256	1274271	1462	3090		Goingoindougou artisanal workings
7	545249	1274241	1463	4090		Goingoindougou artisanal workings
8	545254	1274124	1464	179		Goingoindougou artisanal workings
9	545258	1274146	1465	3090		Goingoindougou artisanal workings
10	545260	1274212	1466	>10000	31	Goingoindougou artisanal workings
11	541994	1279315	1467	1570		Kankou Moussa Southwest
12	542065	1279327	1468	537		Kankou Moussa Southwest
13	542076	1279322	1469	213		Kankou Moussa Southwest
14	541725	1279301	1470	3520		Kankou Moussa Southwest
15	542177	1279313	1471	93		Kankou Moussa Southwest
16	543638	1281514	1472	155		Niaouleni South
17	543670	1281548	1473	24		Niaouleni South
18	543680	1281536	1474	17		Niaouleni South
19	543662	1281511	1475	10		Niaouleni South
20	543648	1281522	1476	428		Niaouleni South

TABLE 7. PIT SAMPLING RESULTS BY FRONTLINE

The results from the pits in the Goingoindougou area show a number of significant gold values, though it is noted that pits along only a 150m strike length of the main workings were sampled. Sample 5 was from an alluvial working 3 km west of the eluvial operations at Goingoindougou and lies north of a strong east-west line of termite anomalies that appear to lie in cuirasse above the river terraces. The samples at Kankou Moussa traverse the main area of working and return moderate gold values. Samples from pits in Niaouleni South returned only weak gold values, while the Lebre Plateau samples returned irregular values up to 1.5 g/t Au. Results are shown in Appendix 1.

6.5. TRENCH SAMPLING

Five old trenches totaling 250m in length have been cleaned and sampled by Frontline in the Lebre Plateau area. A total of 250 samples were collected and submitted to the ALS laboratory in Bamako for gold analysis. The trenches cover a strike length of 300m. Only one trench returned significant results, with a one metre sample returning 1.08 g/t Au with slightly elevated gold values (0.1-0.2 g/t) extending for two metres on the west and one metre on the east. This sample was collected from altered, haematitic saprolite with quartz stockworks that had previously been exploited by local miners. One trench located in the Kankou Moussa area has been cleaned in readiness for sampling. Howe viewed one of the trenches at Lebre Plateau, confirmed its position and observed that the sampling had been conducted from narrow channel samples.

7. DRILLING

7.1. ROTARY AIR BLAST (RAB) DRILLING

The RAB programme was designed to test the areas of artisanal working identified within the Lebre Plateau, Niaouleni South, Kankou Moussa and Goingoindougou areas. The programme comprised drilling lines oriented east-west (Figure 19). Significant results are shown on the table below, and the positions of the RAB lines are shown on Figure 19. Appendix 2 presents a complete list of the drilling parameters and results of the RAB holes.

Hole #	Depth		Au_ppm	Average grade ppm	Area
	From	To			
RA-N-10-09	56	57	0.32	2.12 over 4m/ 60-64m	Goingoindougou
	57	58			
	58	59	0.24		
	59	60			
	60	61	0.65		
	61	62			
	62	63	3.58		
	63	64			
	64	65	0.12		
	65	66			
	66	67	0.31		
	67	68			
	68	69	0.07		
	69	70			
	70	71	0.14		
	71	72			
	72	73	0.13		
	73	74			
RA-N-10-21	8	9	1.04	1.04 over 2m / 8-10m	Goingoindougou
	9	10			
	10	11	0.42		
	11	12			
	12	13			
	13	14	0.32		
	14	15			
	15	16	0.28		
	18	19			
	19	20	0.19		
RA-N-10-26	20	21	0.13		

	21	22		1.82 over 8m/ 42-50m including 5.63 over 2m - - - - 0.50 over 2m/ 54-56m	Goingoindougou
	28	29			
	29	30	0.21		
	42	43	5.63		
	43	44			
	44	45			
	45	46	0.41		
	46	47			
	47	48	0.56		
	48	49			
	49	50	0.67		
	52	53			
	53	54	0.1		
	54	55			
	55	56	0.5		
RA-N-10-26	56	57		1.26 over 2m /70-72m	Goingoindougou
	57	58	0.48		
	58	59			
	59	60	0.27		
	60	61			
	61	62	0.12		
	62	63			
	63	64	0.26		
	70	71			
	71	72	1.26		
RA-N-10-36	6	7		0.53 over 2m /6-8m	
	7	8	0.53		
RA-N-10-37	22	23		1.13 over 2m /26-28m	Niaouleni South
	23	24	0.22		
	24	25			
	25	26	0.2		
	26	27			
	27	28	1.13		
	28	29			
	29	30	0.24		
	30	31			
	31	32	0.23		
	36	37			
	37	38	0.1		
	42	43			
	43	44	0.1		
	48	49			
	49	50	0.11		
	52	53			
	53	54	<0,01		
	54	55	0.45		

	55	56			
RA-N-10-39	2	3	0.59	0.59 over 2m /2-4m	Niaouleni south
	3	4			
RA-N-10-57	22	23	0.2	0.81 over 2m /26-28m	Niaouleni South
	23	24			
	24	25	0.1		
	25	26			
	26	27	0.81		
	27	28			
	28	29			
29	30	0.05			
RA-N-10-59	4	5	0.59	0.59 over 2m /4-6m	Niaouleni South
	5	6			
	6	7	0.49		
	7	8			
	8	9	0.11		
	9	10			
	10	11	0.12		
	11	12			
RA-N-10-60	26	27	0.43	0.61 over 2m /30-32m	Niaouleni South
	27	28			
	28	29	0.33		
	29	30			
	30	31	0.61		
	31	32			
	32	33	0.15		
	33	34			
RA-N-10-62	6	7	0.18	0.68 over 2m /8-10m	Niaouleni South
	7	8			
	8	9	0.68		
	9	10			
	10	11	0.25		
	11	12			
	12	13	0.14		
	13	14			
RA-N-10-63	28	29	0.11	0.56 over 2m /30-32m	Niaouleni South
	29	30			
	30	31	0.56		
	31	32			
	32	33	0.12		
	33	34			

	42	43		2.14 over 2m /42-44m	
	43	44	2.14		
	44	45			
	45	46	0.11		
	48	49			
	49	50	0.31		
RA-N-10-69	62	63		0.51 over 2m /62-64m	Niaouleni south
	63	64	0.51		
RA-N-10-87	12	13		0.60 over 2m /12-14m	Kankou Moussa
	13	14	0.6		
	14	15			
	15	16	0.21		
	18	19			
	19	20	0.21		
	20	21		0.62 over 2m 60-62m	
	21	22	0.21		
	60	61			
	61	62	0.62		
RA-N-10-91	38	39		0.80 over 2m /38-40m	Kankou Moussa
	39	40	0.8		
RA-N-10-96	8	9			Kankou Moussa
	9	10	0.16		
	26	27			
	27	28	0.11		
	28	29			
	29	30	1.68		
RA-N-10-97	28	29		2.1 over 10m/30-40m including 3.81 over 4m and 2.5 over 2m	Kankou Moussa
	29	30	0.21		
	30	31			
	31	32	2.56		
	32	33			
	33	34	5.05		
	34	35			
	35	36	0.16		
	36	37			
	37	38	0.14		
	38	39			
	39	40	2.5		
	40	41			
	41	42	0.16		
RA-N-10-97	48	49			Kankou Moussa
	49	50	0.11		
	50	51			
	51	52	0.12		

	60	61			
	61	62	0.37		
	62	63			
	63	64	0.42		
	66	67			
	67	68	0.13		
	68	69			
	69	70	0.1		
	70	71			
	71	72			
RA-N-10-118	18	19		0.60 over 2m /18-20m	
	19	20	0.6		
	20	21			
	21	22	0.14		
RA-N-10-119	0	1		0.55 over 2m /4-6m	Kankou Moussa
	1	2	0.24		
	4	5			
	5	6	0.55		
	6	7			
	7	8	0.12		
	8	9			
	9	10	0.1		
	10	11			
	11	12	0.1		
	12	13			
	13	14	0.1		
RA-N-10-120	10	11		0.81 over 2m /10-12m	Kankou Moussa
	11	12	0.81		
RA-N-10-130	38	39		3.24 over 4m /38-42m	Lebre Plateau
	39	40	0.62		
	40	41	5.85		
	42	43			
	43	44	0.28		
	44	45			
	45	46	0.13		
RA-N-10-134	16	17			Lebre
	17	18	0.35		

	18	19	0.56	0.56 over 2m /18-20m 0.54 over 4m /26-30m	Plateau
	19	20			
	22	23	0.15		
	23	24			
	24	25	0.32		
	25	26			
	26	27	0.52		
	27	28			
	28	29	0.56		
	29	30			
	30	31	0.14		
	31	32			
RA-N-10-137	54	55	0.63	0.63 over 2m /54-56m	Lebre Plateau
	55	56			
	56	57	0.22		
	57	58			
RA-N-10-138	36	37	0.93	0.93 over 2m /36-38m	Lebre Plateau
	37	38			
RA-N-10-143	10	11	0.12	0.5 over 2m/16-18m 0.58 over 2m/26-28m	Lebre Plateau
	11	12			
	14	15	0.33		
	15	16			
	16	17	0.5		
	17	18			
	26	27	0.58		
	27	28			
RA-N-10-144	0	1	0.18	0.54 over 2m/34-36m	Lebre Plateau
	1	2			
	2	3	0.19		
	3	4			
	34	35	0.54		
	35	36			
RA-N-10-152	0	1	0.11	2.41 over 2m/16-18m	Niaouleni South
	1	2			
	4	5	0.14		
	5	6			
	10	11	0.14		
	11	12			
	16	17	2.41		

	17	18			
	24	25			
	25	26	0.26		
	26	27			
	27	28	0.33		
RA-N-10-153	10	11	0.77	0.77 over 2m/10-12m	Niaouleni South
	11	12			
	36	37	0.21		
	37	38			
	40	41	0.1		
	41	42			
	42	43	0.4		
	43	44			
	48	49	0.12		
	49	50			
RA-N-10-155	0	1	0.75	0.75 over 2m/0-2m	Niaouleni South
	1	2			
	6	7	0.17		
	7	8			
	36	37	0.12		
	37	38			
RA-N-10-157	0	1	0.28	1.21over 4m /2-6m	Niaouleni South
	1	2			
	2	3	1.62		
	3	4			
	4	5	0.79		
	5	6			
	6	7	0.12		
	7	8			
	8	9	0.11		
	9	10			
	18	19	0.1		
	19	20			
	20	21	0.13		
	21	22			
	22	23	0.1		
	23	24			
	26	27	0.1		
	27	28			
	30	31	0.12		
	31	32			
	32	33	0.48		
	33	34			

	36	37	0.17		
	37	38			
RA-N-10-158	4	5	0.27	0.64 over 2m 46-48m 	

	33	34		1.31 over 2m 32-34m	Moussa
RA-N-10-170	28	29	0.1	0.51 over 2m 30-32m	Kankou Moussa
	29	30			
	30	31	0.51		
	31	32			
	< 0.1 ppm				
	1 -0.499 ppm				
	0,5 -0.99 ppm				
	> = 1.00 ppm				

TABLE 8. SIGNIFICANT RAB DRILLING RESULTS

There is insufficient evidence to determine the true widths of the intersections in the above table.

The RAB drilling results are ambiguous. Many of the holes failed to intersect significant mineralisation, with only 23 holes returning elevated gold values, many of which occur as isolated mineralised intercepts. The holes were, in most cases, drilled to the west on the assumption of easterly dipping mineralisation, though on several mineralised sections the mineralisation appears to be near vertical or even west dipping. The spacing between the holes is sufficient that steep mineralisation could be missed on adjacent holes. Comparison with historical RC and core holes also indicates that some of the RAB holes were too shallow to reach mineralisation. A few holes at Kankou Moussa were stopped due to high water table at the eastern edge of the plateau area close to the headwaters of two rivers.

At Lebre Plateau, holes were drilled on three traverses across old artisanal workings. Most holes returned low gold grades, though three intersected narrow zones of mineralisation carrying up to 5.8 g/t over 2 metres intersection length.

A single hole on a RAB traverse drilled east of the artisanal operations across a single point soil gold anomaly intersected a significant gold value of 5.85 g/t Au over two metres drilled interval in a saprolitised felsic dyke. It is not possible to estimate the true width of the intersection.

The Niaouleni South RAB drilling returned gold values ranging up to 2.1 g/t Au, but it is noted that three of the holes contained significant amounts of visible gold that were not necessarily reflected in the assays, indicating a strong nugget effect. It is also noted that a single section with multiple intersections in the majority of the holes was drilled subparallel to one of the interpreted west-northwest cross fractures in this area, and adjacent drill sections show little or no mineralisation. This may further suggest the presence of mineralised cross fractures.

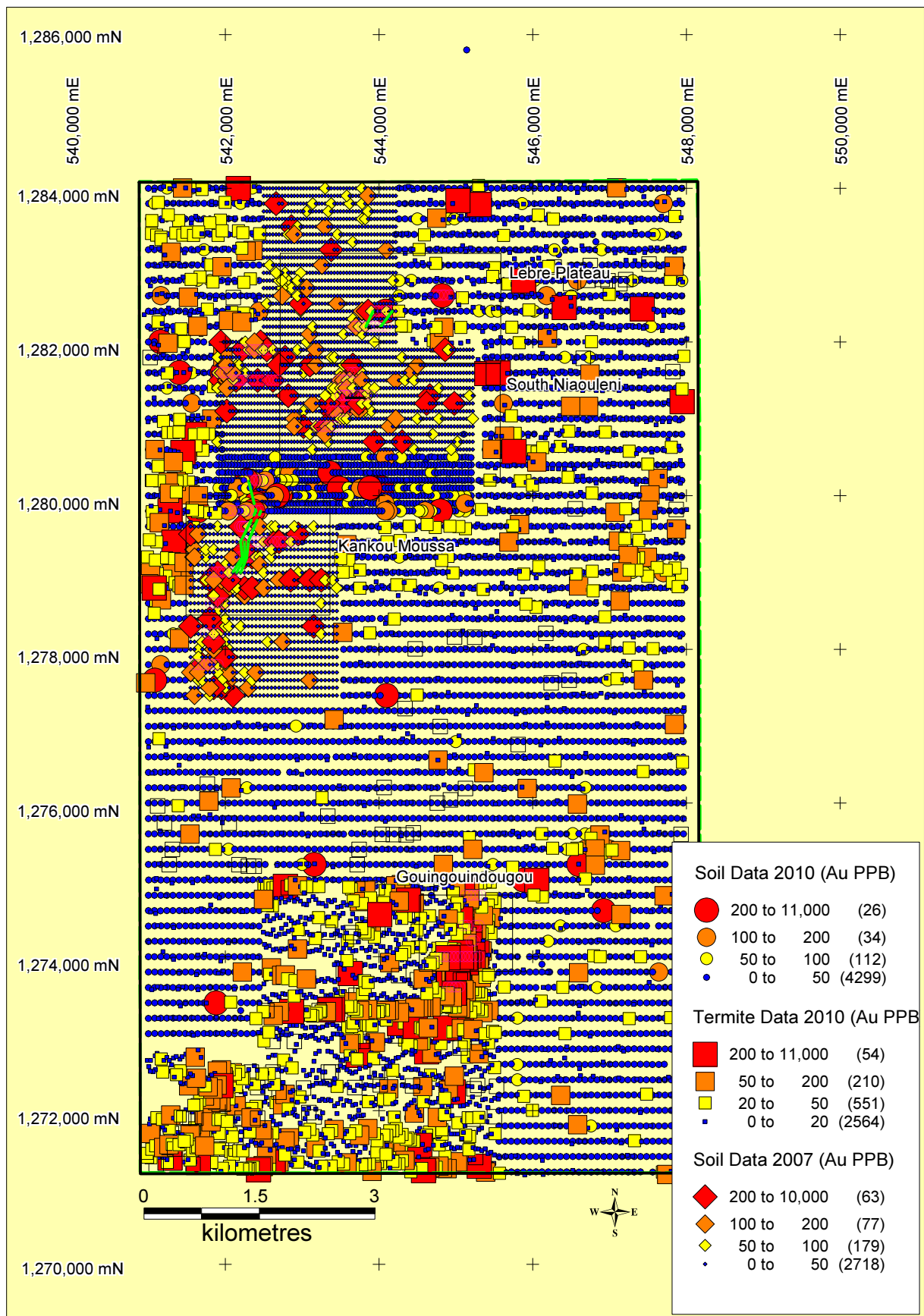


FIGURE 19: RAB DRILLHOLES AND GEOCHEMISTRY,
2007-2010



A C A Howe International Limited

Of the Kankou Moussa holes, only two returned significant values. These were drilled in the western side of the mining area, where Howe interprets a west-northwesterly-trending cross fracture. However, several holes were stopped in quartz veining and a series of three parallel veins are tentatively interpreted in the western part of the artisanal operations, extending at least 425m in a northerly direction within a 100m wide zone. This appears to have been followed by a spur of artisanal working in the northwest corner of the excavated area. The zone appears to continue to the northeast a further 450m though it pinches to the north to about 60m and only two veins appear to be present.

The holes at Goingoindougou returned significant gold values from depth in several widely spaced holes along a 400m strike length. Previous diamond drilling by Mink indicated a strongly mineralised zone parallel and some 100m to the west of the main artisanal mining area, beneath ancient surface workings.

The table below shows significant features shown on the RAB logs.

Section	RAB Holes	Area
1273600	22,23,24,25	Goingoindougou
1274000	12,13,14,15,16,17,18,19,20,21,26	Goingoindougou
1274200	10,11	Goingoindougou
1274400	06,07,08,09	Goingoindougou
1274800	01,02,03,04,05	Goingoindougou
1277800	71,72,73,74,75,76,77	Kankou Moussa
1278200	83,84,85,86,87	Kankou Moussa
1278600	78,79,80,81,82	Kankou Moussa
1279000	88,89,90,91,92,93,94,95	Kankou Moussa
1279200	163,164,165,166,167	Kankou Moussa
1279400	96,97,98,99,100,101,102,103,104,105,106,107,108,109,110	Kankou Moussa
1279600	78,79,80,81,82,168,169,170,171,172,173	Kankou Moussa
1279800	111,112,113,114,115,116,117,118,119	Kankou Moussa
1280200	120,121,122,123,124,125	Kankou Moussa
1280900	65,66,67,68,69,70	Niaouléni South
1281100	60,61,62,63,64	Niaouléni South
1281300	151,152,153,154,155,156,157,158,159,160,161,162	Niaouléni South
1281500A	27,28,29,30	Niaouléni South
1281600B	57,58,59	Niaouléni South
1281500B	35,36, 149,150,37,38,39,40,41,42,43,44,45,46,47,	Niaouléni West
1281600A	31,32,33,34	Niaouléni West
1281900	48,49,50,51,52,53,54,55,56	Niaouléni West
1282200	139,140,141,142,143,144,145,146,147,148	Lebre Plateau
1282400	132,133,134,135,136,137,138	Lebre Plateau
1282600	126,127,128,129,130,131	East Lebre Plateau
KEY Visible Gold Quartz Vein at base of hole High Gold Values returned High Water Table Old workings encountered on hole		

TABLE 9. SIGNIFICANT FEATURES IN RAB HOLES

8. SAMPLING METHOD AND APPROACH

All field work has been conducted by Touba employees supervised by a Frontline geologist. They are paid directly by Frontline. Howe has observed the same field teams conducting soil surveys elsewhere in Mali and is satisfied that the work has been conducted to a high, professional standard. The table below summarises the sampling conducted on the project since 2007. The totals collected by Frontline are shown in the 2010 column .

	Total per year				Total
	2007	2008	2009	2010	
Trenches	0	0	0	403	403
Pits	0	0	0	20	20
Termite mounds	92	0	1,589	2,026	3,707
Soils	924	1,216	699	3,807	6,646
RAB			0	4,631	4,631
TOTAL SAMPLES					15,407

TABLE 10.SAMPLING STATISTICS ON NIAOULENI

8.1. SOIL SAMPLING

3,807 samples were collected during February and March 2010 on east-west grid lines 200m apart, with samples every 80m. This sample spacing appears adequate to identify the main mineralised trends in all sampled areas and has identified additional areas that warrant follow-up. The survey locations are shown on Figure 18.

Samples are collected at 50cm depth in areas of soil/laterite cover, and where cuirasse is present, samples are collected from surface after cleaning. The samples are sieved on site until 500 gm of material less than 80 mesh is accumulated. Every 30th sample submitted to the assay house is a blank or standard which is inserted in sample batches in the field. Blanks comprise crushed and pulverised barren sandstone from the vicinity of Bamako; assays demonstrate that their gold content is below detection. Every 50th sample collected is twice the normal size, and is mixed and split into two duplicates in the field.

The material sampled is very variable, from true soils, alluvial deposits, to lateritic gravel and cuirasse, and the variability of the duplicates in certain areas, particularly where lateritic gravel with quartz fragments occur, reflects this variation. Geomorphological maps are being prepared to help the analysis of the results.

Gold was the only metal tested for, and Howe considers that additional elements such as base metals and, in particular, arsenic should be included in future assaying. Press releases from the adjacent AGG property, described in more detail in section 11 of this report note the usefulness of arsenic as a pathfinder that could enable the resolution of structure and continuity of mineralisation.

8.2. TERMITE MOUND SAMPLING

Samples were collected along east-west traverses 200m apart. Every 80m, the nearest mound to the traverse line was sampled and its position recorded by GPS. The sample spacing is adequate to identify the known mineralised trends and several new areas have been identified for follow-up. Sample points are shown on Figure 18.

2,026 termite mounds were sampled in 2010 using composites of a series of samples collected on two orthogonal vertical lines across the mounds; these were coned and quartered to provide a 1 to 1.5 kg

sample for assay and the samples were prepared and assayed as per the soil samples. Every 30th sample submitted to the assay house is a blank or standard which is inserted in sample batches in the field. Blanks comprise crushed and pulverised barren sandstone from the vicinity of Bamako; assays demonstrate that their gold content is below detection. Every 50th sample is twice the normal size, and is mixed and split into two duplicates in the field.

8.3. TRENCH SAMPLING

403 channel samples were collected from five old trenches originally excavated by Mink to test the artisanal mining zone on the Lebre Plateau. Frontline cleaned the trenches prior to sampling. The samples were collected from the north wall of the deepest metre of the trenches, from contiguous one metre long, 30 cm wide east-west channels. Each sample was then poured as a conical heap on a clean surface (a clean sample bag) and divided in four quarters; two opposite quarters were eliminated, and the two other ones were mixed together and retained; this splitting operation was repeated until a sample of 2-3 kg was obtained. The split sample was then put in a plastic bag with a numbered tag inside, and the number of the tag written directly on the plastic bag. The sample bags were then taken to the camp, where they were prepared for transport to the ALS laboratory.

In four of the trenches, quartz stockworks were observed either in laterite or saprolite. The locations of the trenches are shown on Figure 3, and trench sampling results are shown in Appendix 1. No duplicate or standard samples were inserted in the collected samples.

Howe notes that towards the end of their campaign, Mink started to collect panel samples rather than channel samples and found that they obtained more reliable and repeatable samples. It is recommended that future trench sampling by Frontline is conducted in a similar fashion.

8.4. PIT SAMPLING

Twenty artisanal working pits were sampled by Frontline. The samples were collected from channels cut along east west lines in the north wall of the basal metre of the pits and from the floor of the pits. The material from the two channels was mixed and split, resulting in 3 kilogram samples. Only horizons within the lateritic profile and upper part of the saprolite were accessed by the trenches and pits. Sampled pits are shown on Figure 3. Howe considers that future pit sampling should utilise panel sampling rather than the narrow channels utilised to date.

Trench and pit sampling was always conducted under the supervision of a geologist. No duplicate or standard samples were inserted in the collected samples.

8.5. RAB DRILL SAMPLING

173 holes totalling 9,521 m were completed from April 21 2010 to June 2010. The drilling contractor was West Africa Drilling Services (WADS).

The drill traverses were sited at the artisanal mining areas at Lebre Plateau, Niaouléni South, Kankou Moussa and Goinoindougou across geochemical anomalous zones or areas where continuity of the mineralised trends was expected. The RAB holes did not penetrate beneath the saprolite to fresh rock.

On a specific target zone, the lines were spaced between 100 to 400 m apart with spacing of 25 to 35 m between holes along the lines. As the mineralisation comprises narrow, steeply dipping quartz veins, Howe considers that the holes may have been too far apart to establish continuity and to correlate the mineralisation adequately between holes, and that the chosen inclination direction may have been selected before the structural orientations had been established. The majority of holes were drilled at -50° to -55° towards an azimuth of 270°, with a few steeper holes. On one line, 1281300N, three holes

were drilled towards 90° and on line 1279600N, 6 holes were drilled to the east and west from three collar positions.

Samples were taken every one or two metres down the hole and the entire hole was sampled. The samples were collected at the exit of the drill cyclone with plastic buckets, resulting in 30-35 kg of material. The cyclone was blown clean by the drill operator between samples. Each sample was split with a high capacity splitter until a two to three kg sample for assay and a duplicate were obtained, and both samples were bagged and numbered. The excess material was poured as heaps of cuttings on the ground in a systematic down-hole line for photographing and logging by a geologist. Control samples were inserted at approximately every 25 samples, and a duplicate sample and a blank sample were alternatively intercalated in the sampling sequence.

The drilling was supervised by a Touba geologist assisted by an experienced field crew comprising a field technician and labourers. Howe has observed the same crews elsewhere in Mali and is satisfied that the work has been conducted to a high standard. Drill collars and elevations were determined using GPS and Howe's measurements of drill collars, which are marked by concrete plinths, compare closely with Frontline's positions. The cuttings from the RAB drill holes were logged in detail by the supervising geologist and a total of 4,631 composite samples representing two metre intervals were collected. Blanks and standards were inserted and the samples were shipped to ALS Chemex assay labs in Bamako, Mali for assay (see below for sampling and assay methods).

There is some suggestion on the RAB sections that mineralisation dips sub-parallel to the holes, or is steeply dipping and narrow resulting in single, isolated intersections that cannot be correlated. There is also some indication that cross-cutting, mineralised fractures, sub-parallel to the RAB lines may have been inadvertently drilled on one line at Niaouléni South, where visible gold, quartz veining or significantly elevated gold values occur across a width of some 325m. A number of holes at Kankou Moussa terminated in quartz veining which appears to be traceable for some 800m along a north-northeast trend.

The sample results demonstrate a strong nugget effect, though the presence of visible gold and quartz veining indicates the widespread nature of the mineralisation on the property.

9. SAMPLE PREPARATION, ANALYSES AND SECURITY

Once the termite, soil and RAB samples had been collected and numbered, they were placed in rice sacks and delivered directly by a Touba employee to ALS-Chemex in Bamako, an ISO 17025 (Africa) and ISO 9001:2000 accredited laboratory. An assay request form that showed the type of analysis to be performed was filled in by the geologist in the field and was shipped, along with samples to Bamako.

When the samples arrive in the laboratory, they are logged into the ALS tracking system, weighed, dried and finely crushed to better than 70 % passing a 2 mm (Tyler 9 mesh, US Std. No.10) screen. A split of up to 250 g was taken and pulverised to better than 85 % passing a 75 micron (Tyler 200 mesh, US Std. No. 200) screen. Analysis of samples was carried out using fire assay with atomic absorption finish on pulverised cuts of 50 gm, with a detection limit of 5 ppb in the case of the geochemical samples and 0.01 ppm for the RAB samples.

The laboratory has its own internal QA/QC procedures which include the analyses of standards, blanks and random replicates within each sample batch and are submitted as a separate certificate to the client. The results inspected by Howe appear to be within the required tolerance. Frontline's geologists examine the results of their own blanks, standards and duplicates and use an average value if the duplicates vary. The standards and blanks submitted with each batch are within tolerance.

Because of the generally low RAB results from a number of areas where mineralisation was known or expected, where visible gold was reported with no gold values, or where the poor reproducibility of duplicates implied a significant nugget effect, a series of samples was selected for metallic sieve assay

at both the ALS laboratory in Bamako and the SGS laboratory in Kayes, which carries ISO 17025 accreditation. The results are shown below:

Hole	From (m)	To (m)	Visible Gold	ALS Fire assay Au ppm	SGS Metallic Sieve results Au ppm	ALS Metallic Sieve results Au ppm	Area
RA-N-10-10							
306	66	68	Nil	0.02	19.8	<0.05	Goingoindougou
307	68	70	Nil	0.01	2.26	0.4	Goingoindougou
308	70	72	Nil	0.01	0.02	<0.05	Goingoindougou
RA-N-10-26							
745	46	48	Nil	0.56	16.1	0.64	Goingoindougou
746	48	50	Yes	0.67	31.1	1.24	Goingoindougou
747	50	52	Yes	0.05	3.23	0.12	Goingoindougou
748	52	54	Yes	0.01	0.14	0.15	Goingoindougou
749	54	56	Yes	0.5	0.37	0.3	Goingoindougou
RA-N-10-96							Kankou Moussa
2634	40	42	Yes	0.01	0.02	<0.05	Kankou Moussa
2635	42	44	Yes	0.01	14.1	0.05	Kankou Moussa
2636	44	46	Yes	0.05	0.06	0.23	Kankou Moussa
2637	46	48	Yes	0.02	17.3	0.17	Kankou Moussa
2638	48	50	Yes	0.03	0.05	<0.05	Kankou Moussa
2639	50	52	Yes	0.06	23.8	0.05	Kankou Moussa
RA-N-10-158							
4492	52	54	Yes	0.02	20.0	0.35	Niaouléni Sud
4493	54	56	Yes	0.54	27.9	2.75	Niaouléni Sud
4494	56	58	Yes	1.76	17.2	3.06	Niaouléni Sud
RA-N-10-162							
4616	18	20	Yes	0.01	10.0	<0.05	Niaouléni Sud
4617	20	22	Yes	0.01	14.4	<0.05	Niaouléni Sud
4618	22	24	Yes	0.01	17.0	0.11	Niaouléni Sud
4619	24	26	Yes	0.01	20.2	<0.05	Niaouléni Sud
4620	26	28	Yes	0.01	16.0	<0.05	Niaouléni Sud
RA-N-10-164							
4651	22	24	Nil	<0.01	30.3	0.82	Kankou Moussa
4652	24	26	Nil	<0.01	17.3	0.11	Kankou Moussa
4653	26	28	Nil	0.02	12.3	<0.05	Kankou Moussa
4654	28	30	Nil	0.02	13.6	<0.05	Kankou Moussa
4655	30	31	Nil	0.01	13.0	0.11	Kankou Moussa
RA-N-10-163							
4637	10	12	Yes	0.03	0.14	0.42	Kankou Moussa
4638	12	13	Yes	0.01	0.06	<0.05	Kankou Moussa
RA-N-10-159							
4528	60	62	Yes	0.15	0.15	0.31	Niaouléni Sud

4529	62	64	Yes	0.16	36.5	0.31	Niaouléni Sud
4530	64	66	Yes	0.2	19.6	26.9	Niaouléni Sud
4531	66	68	Yes	0.27	27.3	0.22	Niaouléni Sud
4532	68	70	Yes	0.08	24.1	0.07	Niaouléni Sud
4533	70	72	Yes	0.27	43.8	0.43	Niaouléni Sud
4534	72	74	Yes	0.24	28.0	0.55	Niaouléni Sud

TABLE 11. COMPARISON OF FIRE ASSAY AND METALLIC SIEVE ASSAYS FOR SELECTED RAB SAMPLES

The metallic sieve results from ALS are elevated relative to the original fire assays in twenty of the samples, the majority of which reported visible gold and indicate a nugget effect. However, the highly elevated SGS results are under further investigation and alternative assay methodologies such as total leaching are being considered to compensate for the nugget effect.

10. DATA VERIFICATION

Howe examined all available assay data and data compilations by Frontline. The QA/QC procedures that Frontline has in place are closely adhered to and meet industry standards. Howe conducted an analysis of the soil and termite mound sample results and concluded that:

- For both the termite and soil sampling programme, blanks were satisfactory indicating that contamination and smearing of gold grades during sample preparation is not significant.
- The standard sample results were predominantly within the ± 2 Standard Deviation tolerance limits deemed acceptable by Howe. Therefore, it is considered that the returned standards values demonstrated a good degree of laboratory accuracy and precision. The amplitude of cyclicity in the deviation of standard sample results from their expected value does not appear to be significant.
- There does not appear to be a strong bias in the reported results associated with elevated assay grades.
- Duplicates show poor repeatability and a high degree of variability between samples, particularly at higher grades. Considering the acceptable results from blanks and CRMs, poor duplicate results may be associated with a high nugget effect. The unequal distribution of gold particles within the soil or termite mound sample would account for the very high differences observed between some duplicate samples.
- The cause of the poor repeatability should be determined. Howe's limited reanalysis of soil pulps shown below exhibited marked variability suggesting either a lack of homogeneity in the sample or a possible problem at the laboratory, though the latter appears to be ruled out by the blank and standard results.
- On the whole it is considered that the geochemical assay results are broadly representative of the samples taken. However the confidence that may be attributed to individual high or low values must consider the possible high nugget effect. This was observed by Mink in trench sampling; they overcame the problem by collecting larger samples.

As part of any future programme, an ongoing pulp duplicate programme should be implemented to determine the quality of sample pulverisation and homogeneity. If an apparent nugget effect is still observable, it may be appropriate to use the screen preparation assay technique. In addition, any future work should utilise a broader spread of gold values CRMs, to determine the accuracy and precision of results across a range of results.

Howe collected a series of duplicates of soil samples. Only pulps could be located. These were split and renumbered for assay. Results are shown below.

Original Sample Number	Au ppb	Howe number	Au ppb
5105	22	DPNC-12S	11
5178	35	DPNC-15S	7
5241	70	DPNC-18S	29
5319	11	DPNC-10S	7
5345	98	DPNC-14S	23
5348	116	DPNC-19S	10
5416	56	DPNC-16S	7
5453	158	DPNC-11S	138
5493	40	DPNC-17S	685
5515	21	DPNC-13S	8

TABLE 12.HOWE CHECK SOIL SAMPLES

All but one of reassays of the pulps are significantly lower than the originals, the exception being sample 5493, which comprised fragments of cuirasse and clearly reflects a nugget effect, possibly due to mineralised fragmental quartz. The sample was adjacent to a series of high grade termite mound samples, within a significant anomalous trend. Samples 5241, 5345, and 5348 fall within groups of high grade soils and termite mound samples and may reflect sample inhomogeneity. It is possible that there has been some settling during storage, though an attempt was made to ensure homogeneity during resampling. Although the sample levels tend to be lower than the originals, the majority are still higher than the local background, suggesting that although there may be a problem of homogenisation prior to the final split, it is unlikely that significant anomaly trends would be missed. However, it is recommended that a larger split should be taken for pulverising in future sampling.

Howe also collected a series of check samples from RAB assay rejects and submitted them for re-assay under different numbers. The results are shown below:

Original sample number	Au ppm	Howe number	Au ppm
265	3.58	DPNC-02R	0.447
612	1.04	DPNC-06R	0.852
743	5.63	DPNC-04R	1.855
751	0.48	DPNC-09R	1.780
1031	0.24	DPNC-07R	1.265
2666	2.56	DPNC-01R	4.050
3785	5.85	DPNC-08R	0.642
4299	0.77	DPNC-03R	0.807
4429	1.62	DPNC-05R	0.076

TABLE 13.HOWE CHECK RAB SAMPLES

The check samples reflect inhomogeneity of the RAB samples and suggest a significant nugget effect, though all but the last sample would still be considerably above background and the samples would still identify anomalous zones for follow-up. It is recommended that larger splits should be pulverised prior to assaying.

However, as the work to date has identified clear zones of discrete gold anomalism that occur on several adjacent sample lines that were assayed at different times, it is considered that the sampling

methodology has been adequate for the level required. Howe's analysis of the QA/QC data indicates that the assay results are acceptable. The data present coherent anomaly patterns that reflect mineralisation trends viewed during the site visit and the plotted data are fairly representative of the assay certificates. Various pits, trenches and drill hole collars were identified and their GPS positions confirm the plotted data. Howe considers that the data quality is sufficient for the identification of trenching and drilling targets.

Howe also had the RAB pulp samples assayed for base metals and arsenic. The method utilised was Atomic Absorption Spectrometry on 25gm splits with an Aqua Regis digest. The results are shown below:

SAMPLE NUMBER	As ppm	Cu ppm	Pb ppm	Zn ppm
DPNC-01R	224	103	14	40
DPNC-02R	674	116	13	45
DPNC-03R	703	59	14	9
DPNC-04R	170	25	5	3
DPNC-05R	283	46	23	25
DPNC-06R	227	39	9	3
DPNC-07R	236	87	12	76
DPNC-08R	69	24	3	5
DPNC-09R	284	44	12	12

TABLE 14. RAB PULP BASE METAL ASSAY RESULTS

The results demonstrate elevated arsenic levels in most samples, though other metal values are lower. This association is also seen at the adjacent Kobada property, described below in Section 11.

Howe's examination of historical data and information supplied by Frontline has identified a number of errors in both the original information and the recently compiled data. The latter requires to be carefully checked against both the original data and field information supplied by the Frontline field personnel.

11. ADJACENT PROPERTIES

African Gold Group (AGG) has been exploring its Kobada licence, which lies contiguous to the north of Niaouléni, since 2005. To date most of the exploration work on Kobada has been confined to Zone 1, a 1.2 km long gold in soil anomaly that represents of the 12 km, anomalous Kobada Trend. AGG considers that the Kobada Trend has significant gold potential. Zone-1 has been infill drilled yielding: 81 metres of 1.21 g/t Au, including 18 metres of 2.26 g/t Au, and 48 metres of 2.95 g/t Au including 19.20 metres of 5.91 g/t Au.

In 2008, Watts, Griffis and McOuat Limited of Toronto estimated that Zone 1 of the Kobada deposit contains an Inferred Mineral Resource of 8.5million tonnes at a grade of 1.99 g/t Au above a 0.5 g/t cut-off. This meets NI 43-101 guidelines for mineral resources.

The deposit occurs within a southwest-trending shear zone that strikes south into the northern part of the Niaouléni property and appears to represent the northern continuation of the mineralisation in Kankou Moussa and the anomalous trends to its immediate west.

The mineralisation on the Kobada licence is hosted by Birimian metasedimentary rocks that strike at about 020°. The rocks have been saprolitised to depths varying from 45 metres to 180m. The underlying bedrock comprises mica schist with sericite-pyrite-arsenopyrite alteration; two sedimentary types have been recognised, a grey argillite and a poorly sorted greywacke. Two sets of shearing occur within the mineralised zone, one trending 020° parallel to the regional strike trend, intersected by a set trending 045° to 050°. The intersecting shears have produced an en echelon zone with an overall trend of 030°, dipping at 55° to the southeast. Free gold occurs in quartz veins and within arsenopyrite. Late stage shears cut the mineralised zone and remobilisation may have caused possible enrichment in these shears. (African Gold Group website). It is however noted that recent press releases indicate that at least five mineralisation trends have been recognised, and some recent drilling has been directed towards the south, rather than the westerly drill direction that has been usual practice. It is also noted that AGG rely extensively on metallic sieve assaying, considered to be more reliable than fire assay. More recently they have been investigating the use of cyanide leaching of a 2 kg aliquot rather than fire assay or metallic sieve to compensate for the known nugget effect.

The Kobada licence also contains extensive artisanal alluvial, eluvial laterite and primary lode-gold workings. Figure 20 shows its location relative to the Niaouléni property.

12. MINERAL PROCESSING AND METALLURGICAL TESTING

Other than historic trials of washing plants, for which limited incomplete data are available, no detailed mineral processing or metallurgical testing has been conducted.

13. MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES.

No mineral resource or reserve estimations have been conducted to NI 43-101 standards on the Niaouléni property. **Howe considers all of the historical resource and reserve estimates reported herein to be non-compliant with NI 43-101 standards and should therefore not be relied upon.**

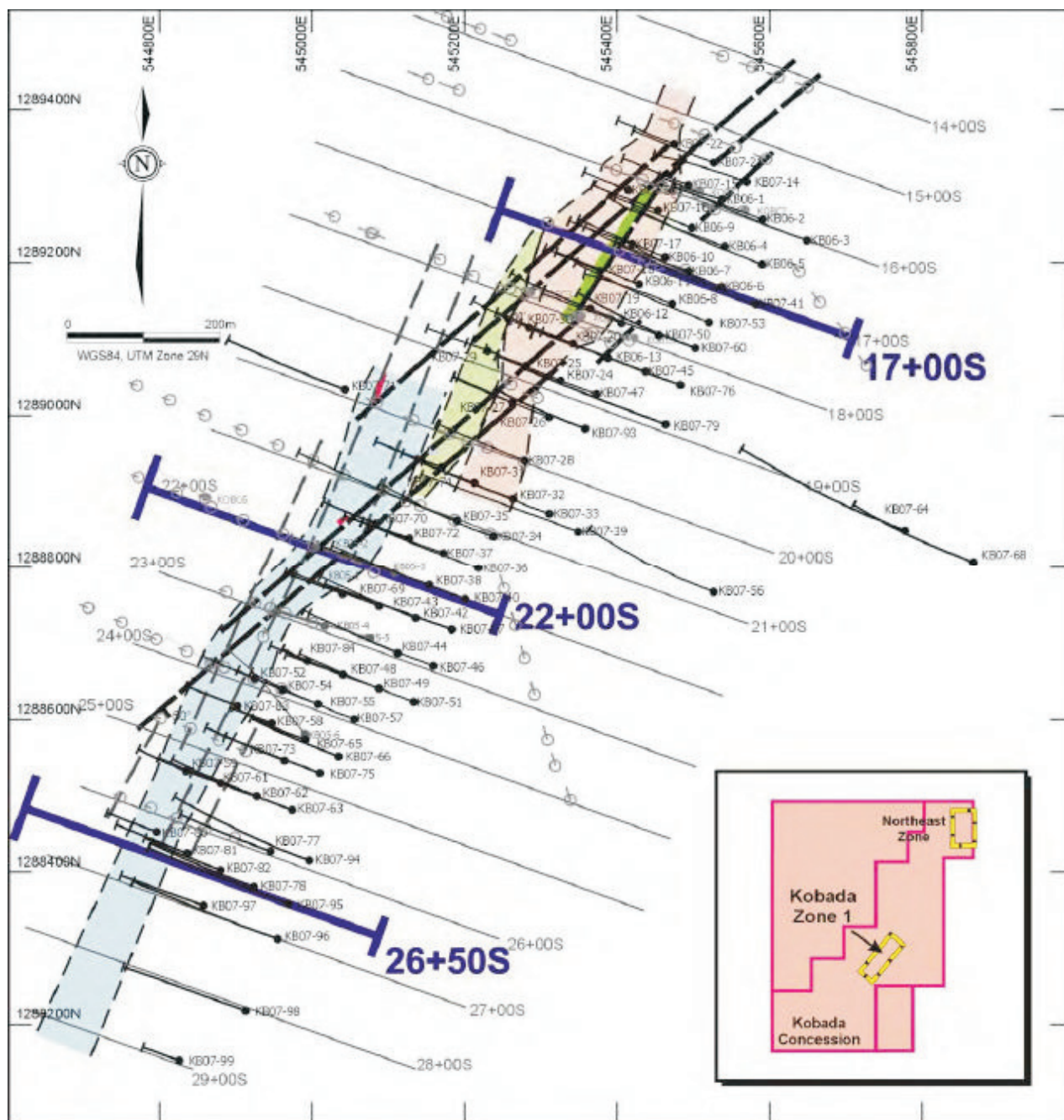
14. OTHER RELEVANT DATA AND INFORMATION

Not applicable.

15. INTERPRETATION AND CONCLUSIONS

The Niaouléni zone is one of the oldest sites of artisanal eluvial and alluvial gold working in Mali, with recorded activity dating back to the fourteenth century. The mineralisation is characterised by nuggets and fine visible gold, much of which is platy and angular, suggesting that it is very close to source. Quartz veining viewed in artisanal pits is observed to continue through the cuirasse to surface where limited dispersion into the eluvial environment is indicated, suggesting that the artisanal workings also lie close to source. The majority of quartz veins, quartz breccias and stockwork systems known in the area carry gold and appear to represent the surface expression of deeper sources. The gold is frequently found intergrown with pyrite and magnetite and haematite. Howe's limited sampling of saprolite and quartz spoil in active underground workings confirmed the presence of anomalous levels of gold and local miners were observed recovering gold from alluvial and eluvial deposits on the property close to the known areas of mineralisation.

There is also a considerable amount of alluvial gold elsewhere on the property in the numerous streams and rivers traversing the property. The gold occurs as smooth, rounded nuggets and grains in palaeoplacers in ancient river terraces and preserved meanders and old river channels, in fine, clayey gravels overlying coarser, clay-poor gravels. Recent stream gravels and flood plains also carry gold, particularly close to Niaouléni village.



LEGEND

-  KB05-1 AGG drill hole
-  COMINOR/BRGM drill hole
-  Section line and number

Interpreted Mineralized Zones (approximate surface expression)

-  South Main Zone
-  Central Zone
-  North Main Zone
-  Main mineralized structure
-  Mineralized cross-structure

FIGURE 20: MINERALISATION AND STRUCTURE OF KOBADA LICENCE, MALI.
(AFTER AFRICA GOLD GROUPS'S WEBSITE)



A C A Howe International Limited

Between 1990 and 1999, Mink Mineral Resources identified four main areas with potential for the development of significant open pit eluvial gold resources, namely the Lebre Plateau, Niaouléni South, Kankou Moussa and Goingoindougou. The following non NI 43-101 compliant resources were announced by Mink in 1998.

Zone	Category	Type	Average width (m)	Length (m)	Depth (m)	Tonnes	Average grade, Au (g/t)
Lebre Plateau	Probable	eluvial	200	300	27	79,500	1.44
Niaouléni South (North of the Dyke)	Possible	Quartz veins	3.16	130	65	150,000	5.76
Niaouléni South (South of the Dyke)	Possible	Quartz veins	3.00	60	65	164,000	1.12
Goingoindougou	Probable	eluvial	20	500	20	300,000	1.37

TABLE 15. MINK NON NI 43-101 COMPLIANT RESOURCES

These do not meet NI 43-101 guidelines for reserves and should not be relied upon.

Mink believed that waste from artisanal mining at Goingoindougou could provide a further gold resource. This is supported by Howe's recent observation of fine gold being recovered from waste at Goingoindougou. Mink also considered that additional gold resources could be present in alluvial material contained within five rivers on the current property.

Howe considers that the historical 'reserves' as reported by Mink cannot be relied upon due to reported assay problems, insufficient drilling and interpretation and lack of available information on QA/QC procedures and accurate survey data for their verification. They do not meet the criteria for reserves required by NI43-101. However, Howe considers that the historical work provides an indication of the project's exploration potential and the extent of gold mineralisation.

The soil sampling by Crystal in the Niaouléni West area confirmed previous results and limited termite mound sampling indicated that the method could be useful in identifying concealed gold mineralisation.

Crystal's satellite imagery interpretation identified underlying structural controls to the mineralisation and indicated a number of targets where favourable structural intersections occur beneath areas of cuirasse where artisanal working was not possible. The significance of these targets is supported by Frontline's survey work.

The more recent soil and termite mound sampling by Frontline has completed the regional scale geochemical coverage of the property. In addition to the confirmation of the known gold mineralisation, three new areas of ancient orpillage have been discovered during the course of the surveys. These form three northeast-trending zones about 1.2 km to the northwest of Lebre Plateau.

Despite problems with reproducibility of individual assays, the surveys have identified significant and extensive trends of gold anomalism at levels similar to those in the known areas of mineralisation that span several traverse lines:

- A 1.27km gold anomaly train up to 500m wide extends to the south of Kankou Moussa.
- A northerly trending zone of termite mound gold anomalies extends some 3.4 km on a divergent trend from the Kankou Moussa south anomaly. This anomaly appears to rotate to a more

easterly trend beyond a major water course that is controlled by a northwest-trending linear structure and continues for a further 3 km to the northwest.

- Scattered, but widespread termite mound gold anomalies also occur in the northwest corner of the property.
- A 700m by 700m zone of soil gold anomalies lies contiguous to the east of the northernmost, newly identified areas of ancient orpillage. The anomalies may be related to a series of east-northeasterly fractures identified from satellite imagery.
- Numerous isolated gold in soil and termite mound anomalies occur in the eastern part of the property; a RAB line across a single point anomaly some 650m east of the Lebre Plateau workings intersected a values of 5.85 g/t Au over a two metre intersection length, associated with a felsic dyke.
- High gold values (in excess of 1g/t) occur in several termite mound samples along a northwest trend about 2 km east of Lebre Plateau.
- A coherent north-northeast-trending group of soil and termite mound anomalies about 1.1 km long and 700m wide occurs in the eastern part of the property.
- A 600m by 600m zone of soil and termite gold anomalies occurs about 1 km northeast of Goingindougou.
- The northern extremity of Goingindougou terminates against a west-trending, discontinuous linear zone of termite anomalies that extends about 1.5 km west.
- Goingindougou also terminates to the south against a strong, east-west trending linear zone of termite mound gold anomalies about 2.75 km long. This zone splits to the east. Although the samples occur along two single traverses, a review of the assay sheets indicates that the QA/QC samples fall within tolerance and suggest that the zones are not artefacts of assay batch error. The traverses cut across an irregular plateau south of a major river valley.
- The southwestern corner of the property contains a significant number of termite mound gold anomalies. The northeastern boundary of this zone is 4 km long and it extends in a northwesterly direction across the corner of the property. It terminates to the northwest against a satellite imagery target; this circular topographic feature may represent the surface expression of a buried intrusive or may simply represent a zone of structural convergence. The linear feature terminating the Goingindougou mineralisation to the south also trends towards this target area.

Frontline is compiling geomorphological maps of the property that together with the sample descriptions will enable refinement of the anomalous zones.

The RAB drilling results are ambiguous. Many of the holes failed to intersect significant mineralisation, with only 23 holes returning elevated gold values, most of which occur as isolated mineralised intercepts. However, several holes without significant gold values report visible gold in panning of returns and a number of holes drilled at Kankou Moussa terminated in quartz veining which appears to extend for at least 850m over a width of 60 to 100m. A single hole on a RAB traverse drilled across a point soil anomaly east of the Lebre Plateau workings intersected a significant gold value associated with a felsic dyke; a small orpillage pit to the immediate south exposed a steep west dipping, north-northeast trending quartz vein about 30 cm wide at the contact between metasediments and a possible felsic dyke.

The RAB holes were, in most cases, drilled to the west on the assumption of easterly dipping mineralisation, though on several mineralised sections the mineralisation appears to be near vertical or even west dipping. The spacing between the holes is sufficient that steep mineralisation could be missed in adjacent holes. Comparison with historical RC and core holes suggests that some of the RAB holes were too shallow to reach mineralisation but also indicates that the predominant westerly direction of the RAB holes may have been subparallel to mineralisation in several areas. The RAB traverses were situated at regular 200 or 400m spacing in an east-west direction along the assumed direction of mineralisation and frequently failed to test discrete soil and termite gold anomalies.

Howe concludes that extensive zones of gold mineralisation have been outlined to date, at Lebre Plateau, Niaouleni South, Kankou Moussa and Goingoindougou, though much of the data is missing or incomplete and no drill core remains from previous operations. The recently identified, extensive areas of ancient artisanal working to the northwest of the Lebre Plateau warrant follow-up. It is clear that the artisanal operations are restricted to areas of thin or absent cuirasse, or areas where the edge of the cuirasse is exposed, allowing access via excavations beneath the cuirasse. Frontline's work to date has successfully identified various areas of gold anomaly remote from the artisanal operations that indicate that the property has considerably more potential than hitherto recognised.

A systematic programme of follow-up surveys and RAB and diamond drilling, is required to advance the project to modern resource status.

16. RECOMMENDATIONS

There is significant alluvial gold potential on the property and this could form a readily exploitable asset that could provide an early cash flow. Although the local miners work the alluvial deposits, there are likely to be areas that are not amenable to the artisanal methods employed by the locals due to high water table or low grades. Detailed examination of high resolution imagery could identify areas that could be amenable to modern mechanised exploitation, where conflict with the interests of the local communities would not arise. These areas could then be tested by drilling or mechanised pitting. This has not been costed as it requires further study; the GIS compilation that is under construction will allow a more detailed assessment of the alluvial potential of the property.

However Howe considers Frontline's initial and principal target should remain the hard rock potential of the property.

The recent onset of the rains will allow the completion of the GIS compilation, which will permit the refining of target selection for further investigation. As part of the compilation, Howe recommends that all geological information recorded in RAB logs is plotted on sections, with particular emphasis on the presence of significant amounts of quartz in the chippings. This may enable the correlation of potential areas of quartz veining and help to determine the trend and continuity of mineralisation. Sections should also include old RC and diamond drill holes. The database should be checked carefully against the original hardcopy data to avoid transcription errors; a number have been noted by Howe in the course of this study and Frontline has been notified. The geomorphological maps of the property that are currently being compiled should be used, together with the sample descriptions to refine the numerous anomalies identified to date remote from the known mineralisation. Alternative assay methods, currently under investigation should be considered to compensate for the considerable nugget effect.

In order to advance the project, Howe recommends a two phase field programme. This is designed to delineate the mineralisation trends in the known mineralised areas and to advance those areas to initial resource delineation. Areas remote from the known mineralisation will also be tested.

16.1. PHASE 1

As previous operators encountered significant problems with assaying, the gold values returned from the greater part of the previous surface and drill sampling are considered unreliable, though the results can be used as a guide to mineralised areas. Howe therefore proposes an initial 3 month programme to confirm and further test the previously defined geochemical anomalies.

Phase 1 would therefore include field examination of newly identified areas of geochemical anomaly together with limited check sampling and infill soil sampling to confirm their trends and continuity. Soils should also be analysed for arsenic. This could assist in the elucidation of mineralised trends and

structures. Limited trial geophysical surveying comprising IP and magnetometer traverses across areas of known mineralisation should be conducted.

In-fill RAB drilling would be conducted in areas where multiple isolated mineralised intersections are recorded. Holes would also be drilled towards the east on selected traverses where westerly dipping mineralisation is suspected. In addition, a series of holes directed to the south should be drilled along those RAB traverses where northeasterly structures are indicated by the geochemical surveys. At Niaouléni South, line 1281300 should be tested by a series of short north-south RAB traverses that cross the original line every 50m. At Kankou Moussa, a series of north-south lines should be drilled across the area of northwest-trending mineralisation identified by Mink.

The newly defined targets remote from the known mineralisation would be field checked and following limited check sampling and infill soil sampling, single RAB lines would be drilled.

RAB holes would be drilled on traverses as shown on Table 17, with holes 25m apart, inclined at 50°. Hole depths of 40m would allow continuous coverage along the lines. Infill traverses would be drilled as necessary, depending on preliminary results. It is estimated that an initial 10,650 m programme would be sufficient to test the known mineralised zones and other high priority, known targets. This could take 3 months to complete.

Zone	Line and Easting	Number of holes	Depth (m)	Drill direction	Spacing (m)	Total (m)
Niaouléni South	1279300 542200	5	50	90	25	250
	1279100 542150	5	50	90	25	250
	existing lines (infill)	9	50	270	50	450
	8X100m N-S lines across 1281300	32	50	180	25	1600
Kankou Moussa	5x200m N-S lines	40	50	180	25	2000
	1279300 (infill)	5	50	90	50	250
	1279100 (infill)	5	50	90	50	250
	existing lines (infill)	9	50	270	50	450
Niaouléni South - (West)	1279350 541290	12	50	90+270	50	600
	1280500 541520	5	50	90 or 270	50	250
	1281500 extension W	5	50	90 or 270	50	250
Niaouléni Northwest	1282700 542620	6	50	270	25	300
	1283500 542830	6	50	270	25	300
	NE traverse 1283600-1283900, 543540 543720	8	50	45	25	400
East area	1279000 547500	12	50	270+90	25	600

Goingoindougou northeast	1275300 546800	16	50	90	50	800
Goingoindougou west	N-S traverse 1274600 544320	10	50	180	25	500
Goingoindougou southwest	N-S traverse 1273050 544300	11	50	180	25	550
Southwest area	1272300 541740	12	50	90	25	600
TOTALS		213				10,650

TABLE 16. PROPOSED RAB DRILLING PHASE 1

16.2. PHASE 2

As part of Phase 2, additional RAB drilling would be planned in the regional areas to follow up the Phase 1 reconnaissance traverses. This could amount to an estimated 7,000m and could enable the planning of diamond drilling in these areas which would be contingent on the results of Phase 1. If the Phase 1 geophysical work proves successful, the survey would be expanded to other areas. For budgetary purposes it is assumed that a further 20 line km would be conducted in Phase 2

Phase 2 diamond drilling would include those targets that can be identified from the current results and represent a logical expansion of the Phase 1 programme. This drilling would not be contingent on Phase 1 results but would be designed to advance the project towards the resource delineation stage. Additional targets would also be defined during Phase 1. For budgetary purposes it is assumed that a total of 5,000m of diamond drilling would be completed in Phase 2.

The top priority areas for diamond drilling are Lebre Plateau and Goingoindougou, where 1,500 m would be drilled on each area.

- At Goingoindougou, a series of diamond drill sections would test the strongest mineralised zones in depth and along lateral extensions of the known mineralisation if warranted. This would comprise four sections with inclined holes 50m, 125m and 200m.
- At Lebre Plateau, four sections with holes to 50, 125m and 200m inclined depth would be drilled.

Drilling at Niouleni South and Kankou Moussa would be contingent on the Phase 1 RAB drilling results. In addition, newly identified targets would be scout drilled. A total of 2,000m is allowed for budgetary purposes.

The total cost of the programme is CDN\$2,397,200

17. ESTIMATED BUDGETS

17.1. PHASE 1

Estimated costs are as follows assuming a total of 3 months:

Staff, security and running costs @ \$5,000 per month	\$15,000
Vehicles: 3 @ \$130 per day	\$35,100
RAB drilling: 10,650 m @ \$40 per metre inclusive*	\$426,000
Assaying: 5,325 2m composite samples @ \$18 including sample preparation	\$95,850
Trial geophysical traversing:	
1.5km each at Lebre Plateau, Niaouleni South, Kankou Moussa and Goingoindougou	\$9,000
Soil surveys: 10 line km, 400 samples @ \$22 inclusive**	\$8,800
Data compilation, analysis, drafting and reporting	\$15,000

TOTAL PHASE 1

CAD\$604,750

17.2. PHASE 2

Camp costs @ \$5,000 per month for 3 months	\$15,000
Geophysical Surveys: 20 km @\$1,500	\$30,000
RAB drilling: 7,000 m @ \$40 per metre inclusive*	\$280,000
Assays: 3,500 2m composite samples @\$18 including sample preparation	\$63,000
Diamond drilling	
Drilling: 5,000 metres @ \$220.00 / m	\$1,100,000
Fuel: 800 litres / day x \$1.40 / litre x 70 days	\$78,400
Assays: 5,000 assays x \$18.00 / assay	\$90,000
Water tanks: 2 tanks x \$230.00 / day / tank x 70 days	\$32,200
Core boxes: 1,600 boxes x \$20.50 / box	\$32,800
Vehicle: 2 @ \$130 / day x 70 days	\$18,200
National geol: 2 geol. @ \$65.00 / day / geol. x 70 days	\$9,100
Labour men: 6 men @x \$10.00 / day x 70 days	\$4,200
National tech: 2 tech. @ \$32.50 / day / tech x 70 days	\$4,550
Reporting, consultancy services and expatriate geologist costs	\$35,000

TOTAL PHASE 2

CAD\$1,792,450

*mob-demob, labourers, geologists and technicians, road and site preparation

**assays, labourers, geologists and technicians

18. LIST OF REPORTS CONSULTED

1. Mineral resources of Mali, 1987, UNDP
2. Rapport géologique annuel 1992, Mink and Viceroy resources Corp.
3. Rapport sur les travaux de recherche pour la période d'octobre 1993 a avril 1994, Mink et Viceroy Resources Corp.
4. Rapport général de recherche présenté pour le renouvellement du permis de Niaouleni, décembre 1994, Mink Lépine
5. 1995 Annual report, Fevrier 1996, Mink Lepine
6. Rapport annuel 1995, mars 1996, Mink Lepine
7. Rapport semestriel de recherche Janvier à juin 1996, Mink Lepine
8. Year-end report December 1997 Niaouleni Gold Project, Mink, internal memo.
9. Compte rendu annuel de l'exploration pour 1997 a la DNGM de la concession d'or de Niaouleni, 10 janvier 1998, Mink
10. Rapport géologique d'évaluation et d'estimation du projet aurifere de Niaouleni, février 1998
11. Etude de prefaisabilité, juin 1998, Mink International Resources Corp.
12. Evaluation sommaire des ressources du placer éluvionnaire de Gouingouindougou, G3 Sarl, décembre 2003 pour le compte de Touba Mining
13. Etude de prefaisabilité exécutée par Mink International Resources Corp, groupe ML Ressources Lté pour le compte de Touba Mining Sarl, sep 2003
14. Niaouleni Property gold project April 2003, M Diallo, Touba Mining
15. Joint Venture Caracal-Touba Mining, summary report April-September 2004
16. Satellite image interpretation of the Niaouleni Area: Mali for Crystal River Resources. E Peters, 2006
17. Monthly reports by Frontline- January to March 2010
18. African Gold Group Inc website and links.



A C A HOWE INTERNATIONAL LIMITED
Geological Consultants

CERTIFICATE OF AUTHOR

1. I, David J Patrick, do hereby certify that I am Director and Senior Geologist of ACA Howe International Limited of 254 High St, Berkhamsted, Hertfordshire HP4 1AQ, UK
2. This certificate applies to the Technical Report dated August 29th, 2010 and titled "Technical Report on the Exploration Assets of Frontline Capital Corporation in Mali".
3. I graduated with a Bachelor of Science degree in geology from the University of Manchester in 1967, and a PhD in geochemistry from the University of Manchester in 1970.
4. I am a Fellow of the Institution of Materials, Minerals and Mining and a Fellow of the Australasian Institute of Mining and Metallurgy.
5. I have worked as a geologist for a total of 40 years since my graduation from university. I have more than 15 years of experience in the exploration for, and assessment of, Birimian gold mineralisation in West Africa.
6. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfil the requirements to be a "qualified person" for the purposes of NI 43-101.
7. I visited Mali from 22nd to 25th July, visited the Niaouléni property on 24th July 2010 and spent the remainder of the period in Bamako at the head office of Touba, the owners of the property, reviewing data and discussing the project with officers of Touba.
8. I am responsible for all sections of the technical report.
9. I am independent of the issuer applying all of the tests in section 1.4 of National Instrument 43-101.
10. My prior involvement with the property that is the subject of the Technical Report involved assessing the property as an independent consultant for a previous joint venture partner in the property, working for professional fees only.
12. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form. To the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
11. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
12. I consent to the filing of this Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public of the Technical Report.

Signed for and behalf of ACA Howe International Limited, this 29th August 2010

Dr D Patrick

**APPENDIX 1. PIT, CHIP AND TRENCH SAMPLE
RESULTS**

Pits Number	INTERVAL	Au	UTM NORTH	UTM EAST
LIPt1	0-2m	27	1282411	544059
LIPt1	2-4m	12	1282411	544059
LIPt1	4-6m	13	1282411	544059
LIPt1	6-8m	16	1282411	544059
LIPt1	8-10m	48	1282411	544059
LIPt1	10-12m	47	1282411	544059
LIPt2	0-2m	26	1282436	544065
LIPt2	2-4m	505	1282436	544065
LIPt2	4-6m	249	1282436	544065
LIPt2	6-8mc	22	1282436	544065
LIPt3	0-2m	29	1282463	544060
LIPt3	2-4m	15	1282463	544060
LIPt4	0-2m	13	1282485	544059
LIPt4	2-4m	9	1282485	544059
LIPt4	2-6m	7	1282485	544059
LIPt4	6-8m	24	1282485	544059
LIPt5	0-2m	10	1282517	544062
LIPt5	2-4m	11	1282517	544062
LIPt5	4-6m	-1	1282517	544062
LIPt6	0-2m	76	1282467	544076
LIPt6	2-4m	8	1282467	544076
LIPt6	4-6m	11	1282467	544076
LIPt7	0-2m	46	1282453	544084
LIPt7	2-4m	17	1282453	544084
LIPt7	4-6m	19	1282453	544084
LIPt7	6-8m	9	1282453	544084
LIPt8	0-2m	20	1282420	544090
LIPt8	2-4m	29	1282420	544090
LIPt8	4-6m	6	1282420	544090
LIPt9	0-2m	8	1282418	544092
LIPt9	2-4m	11	1282418	544092
LIPt9	4-6m	17	1282418	544092
LIPt9	6-8m	15	1282418	544092
NICH1	PU	11	1279400	541970
NICH10	PU	1240	1279427	542181
NICH11	PU	262	1279425	542167
NICH12	PU	230	1279670	542343
NICH13	PU	1260	1279695	542417
NICH14	PU	38570	1279690	542383
NICH15	PU	72	1279731	542377
NICH16	PU	7	1279681	542269
NICH17	PU	12	1279698	542232

NICH18	PU	20	1279733	542235
NICH2	PU	7	1279400	541970
NICH20	GLI	6	1279572	542497
NICH21	GLI	2.5	1279536	542517
NICH22	PU	41	1279229	541902
NICH23	PU	22	1279219	541905
NICH3	PU	2.5	1279415	542012
NICH4	PU	67	1279461	542183
NICH5	PU	28	1279461	542183
NICH6	PU	26	1279482	542254
NICH7	PU	1300	1279524	542209
NICH8	PU	25	1279524	542209
NICH9	PU	2.5	1279511	542210
NIPt1	0-2m	206	1279454	542255
NIPt1	2-2,7m	23	1279454	542255
NIPt10	0-2m	-1	1279421	542170
NIPt10	2-3,4m	-1	1279421	542170
NIPt10	3,4-5,4m c	-1	1279421	542170
NIPt11	0-2m	-1	1279425	542152
NIPt11	2-4m	-1	1279425	542152
NIPt11	4-6m	-1	1279425	542152
NIPt12	0-2m	-1	1279430	542147
NIPt12	2-3m	-1	1279430	542147
NIPt13	0-2m	-1	1279437	542162
NIPt13	2-4m	-1	1279437	542162
NIPt13	4-4,5m	-1	1279437	542162
NIPt14	0-2m	-1	1279407	542155
NIPt14	2-4m	-1	1279407	542155
NIPt14	4-6m	-1	1279407	542155
NIPt15	0-2m	-1	1279394	542152
NIPt15	2-4m	-1	1279394	542152
NIPt15	4-6m	-1	1279394	542152
NIPt16	0-2m	-1	1279372	542165
NIPt16	2-4m	-1	1279372	542165
NIPt16	4-6m	103	1279372	542165
NIPt16	6-7m	150	1279372	542165
NIPt17	0-2m	53	1279356	542168
NIPt17	2-4m	59	1279356	542168
NIPt17	4-6m	253	1279356	542168
NIPt17	6-8mc	716	1279356	542168
NIPt18	0-2m	44	12791351	542152
NIPt18	2-4m	10	12791351	542152
NIPt18	4-6m	43	12791351	542152
NIPt18	6-8mc	210	12791351	542152
NIPt18	8-10mc	181	12791351	542152

NIPt19	0-2m	16	1279350	542145
NIPt19	2-4m	11	1279350	542145
NIPt19	4-6m	47	1279350	542145
NIPt2	0-2m	70	1279482	542254
NIPt2	2-4m	110	1279482	542254
NIPt2	4-4,5m	22	1279482	542254
NIPt20	0-2m	12	1279343	542110
NIPt20	2-4m	8	1279343	542110
NIPt20	4-6m	39	1279343	542110
NIPt20	6-8mc	26	1279343	542110
NIPt21	0-2m	22	1279403	542132
NIPt21	2-4m	13	1279403	542132
NIPt22	0-2m	2.5	1279397	541964
NIPt22	2-4m	2.5	1279397	541964
NIPt22	4-6m	6	1279397	541964
NIPt22	6-8mc	10	1279397	541964
NIPt23	0-2m	2.5	1279409	541982
NIPt23	10-12mc	44	1279409	541982
NIPt23	12-14mc	66	1279409	541982
NIPt23	2-4m	22	1279409	541982
NIPt23	4-6m	6	1279409	541982
NIPt23	6-8mc	21	1279409	541982
NIPt23	8-10mc	13	1279409	541982
NIPt24	0-2m	8	1279422	542027
NIPt24	2-4m	8	1279422	542027
NIPt24	4-6m	2.5	1279422	542027
NIPt24	6-8mc	2.5	1279422	542027
NIPt24	8-10mc	47	1279422	542027
NIPt25	0-2m	16	1279458	542038
NIPt25	2-4m	2.5	1279458	542038
NIPt25	4-6m	2.5	1279458	542038
NIPt26	0-2m	32	1279365	542186
NIPt26	2-4m	43	1279365	542186
NIPt26	4-6mc	41	1279365	542186
NIPt27	0-2m	40	1279342	542200
NIPt27	2-4m	35	1279342	542200
NIPt27	4-6mc	25	1279342	542200
NIPt28	0-2m	16	1279334	542220
NIPt28	2-4m	8	1279334	542220
NIPt29	0-2m	7	1279353	542228
NIPt29	2-3m	12	1279353	542228
NIPt3	0-2m	139	1279468	542208
NIPt3	2-4m	27	1279468	542208
NIPt30	0-2m	68	1279363	542200
NIPt30	2-4m	21	1279363	542200

NIPt30	4-6m	26	1279363	542200
NIPt31	0-2m	18	1279375	542200
NIPt31	2-4m	55	1279375	542200
NIPt31	4-6m	42	1279375	542200
NIPt32	0-2m	80	1279394	542214
NIPt32	2-4m	22	1279394	542214
NIPt33	0-2m	33	1279413	542219
NIPt34	0-2mc	27	1279372	542238
NIPt34	2-4mc	23	1279372	542238
NIPt34	4-6mc	20	1279372	542238
NIPt34	6-8mc	6	1279372	542238
NIPt35	0-2m	28	1279644	542375
NIPt36	0-2m	151	1279657	542329
NIPt36	2-4m	143	1279657	542329
NIPt37	0-2m	31	1279690	542383
NIPt37	2-4m	173	1279690	542383
NIPt37	4-6m	27	1279690	542383
NIPt38	0-2m	47	1279681	542424
NIPt38	2-4m	53	1279681	542424
NIPt38	4-6m	29	1279681	542424
NIPt38	6-8mc	632	1279681	542424
NIPt39	0-2m	52	1279673	542401
NIPt39	2-4m	31	1279673	542401
NIPt4	0-2m	41	1279461	542183
NIPt4	2-4m	19	1279461	542183
NIPt4	4-6m	9	1279461	542183
NIPt40	0-2m	28	1279653	542419
NIPt40	2-4m	26	1279653	542419
NIPt41	0-2m	116	1279695	542408
NIPt41	10-12mc	88	1279695	542408
NIPt41	2-4m	147	1279695	542408
NIPt41	4-6m	53	1279695	542408
NIPt41	6-8mc	139	1279695	542408
NIPt41	8-10mc	15	1279695	542408
NIPt42	0-2m	61	1279686	542375
NIPt42	2-4m	21	1279686	542375
NIPt43	0-2m	35	1279695	542417
NIPt43	10-12mc	155	1279695	542417
NIPt43	12-14mc	17	1279695	542417
NIPt43	14-16mc	12	1279695	542417
NIPt43	2-4m	45	1279695	542417
NIPt43	4-6m	61	1279695	542417
NIPt43	6-8m	14	1279695	542417
NIPt43	8-10m	15	1279695	542417
NIPt44	0-2m	109	1279700	542380

NIPt44	2-4m	24	1279700	542380
NIPt45	0-2m	27	1279707	542396
NIPt45	2-4m	32	1279707	542396
NIPt45	4-6m	54	1279707	542396
NIPt46	0-2m	111	1279731	542377
NIPt46	2-4m	25	1279731	542377
NIPt47	0-2m	37	1279736	542392
NIPt47	2-4m	23	1279736	542392
NIPt47	4-6mc	66	1279736	542392
NIPt48	0-2m	33	1279740	542409
NIPt48	2-4m	14	1279740	542409
NIPt48	4-6m	15	1279740	542409
NIPt49	0-2m	56	1279737	542421
NIPt49	2-4m	111	1279737	542421
NIPt5	0-2m	30	1279458	542153
NIPt5	2-4m	56	1279458	542153
NIPt50	0-2m	33	1279713	542424
NIPt50	2-4m	30	1279713	542424
NIPt51	0-2m	62	1279728	542435
NIPt51	2-4m	43	1279728	542435
NIPt51	4-6m	7	1279728	542435
NIPt52	0-2m	103	1279738	542432
NIPt52	2-3,1m	37	1279738	542432
NIPt52	3,1-3,3m	222	1279738	542432
NIPt53	0-2m	26	1279755	542431
NIPt53	2-4m	10	1279755	542431
NIPt53	4-6m	106	1279755	542431
NIPt53	6-8m	28	1279755	542431
NIPt53	8-10m	217	1279755	542431
NIPt54	0-2m	85	1279776	542449
NIPt54	2-4m	17	1279776	542449
NIPt54	4-5m	62	1279776	542449
NIPt55	0-2m	10	1279796	542448
NIPt55	2-4m	50	1279796	542448
NIPt55	4-6m	12	1279796	542448
NIPt55	6-7m	9	1279796	542448
NIPt56	0-2m	72	1279795	542434
NIPt57	0-2m	27	1279782	542459
NIPt57	2-4m	21	1279782	542459
NIPt57	4-6m	75	1279782	542459
NIPt57	6-8m	35	1279782	542459
NIPt58	0-2m	15	1279771	542470
NIPt58	2-4m	12	1279771	542470
NIPt58	4-6m	14	1279771	542470
NIPt58	6-8m	170	1279771	542470

NIPt59	0-2m	116	1279765	542454
NIPt59	2-4m	28	1279765	542454
NIPt6	0-2m	5540	1279479	542136
NIPt6	2-4m	1200	1279479	542136
NIPt6	4-5m	64	1279479	542136
NIPt60	0-2m	61	1279753	542461
NIPt60	2-4m	27	1279753	542461
NIPt61	0-2m	58	1279740	542469
NIPt61	2-4m	15	1279740	542469
NIPt61	4-6m	51	1279740	542469
NIPt62	0-2m	15	1279743	542448
NIPt63	0-2m	9	1279728	542446
NIPt63	2-4m	2.5	1279728	542446
NIPt63	4-6m	8	1279728	542446
NIPt64	0-2m	12	1279724	542460
NIPt64	2-4m	29	1279724	542460
NIPt65	0-2m	12	1279321	542189
NIPt65	2-4m	24	1279321	542189
NIPt65	4-6m	27	1279321	542189
NIPt66	0-2m	20	1279310	542185
NIPt66	2-4m	49	1279310	542185
NIPt66	4-6m	83	1279310	542185
NIPt67	0-2m	30	1279287	542186
NIPt7	0-2m	23	1279495	542150
NIPt7	2-3,7m	17	1279495	542150
NIPt8	0-2m	25	1279511	542171
NIPt8	2-4m	13	1279511	542171
NIPt9	0-2m	19	1279485	542187
NIPt9	2-2,4m	-1	1279485	542187
NISPt1	0-2m	165	1281524	543629
NISPt1	10-12m	20	1281524	543629
NISPt1	2-4m	611	1281524	543629
NISPt1	4-6m	405	1281524	543629
NISPt1	6-8m	29850	1281524	543629
NISPt1	8-10m	309	1281524	543629
NISPt2	0-2m	28	1281539	543636
NISPt2	10-12m	251	1281539	543636
NISPt2	12-14m	6240	1281539	543636
NISPt2	14-16m	2790	1281539	543636
NISPt2	16-18m	775	1281539	543636
NISPt2	18-20m	925	1281539	543636
NISPt2	20-22m	1140	1281539	543636
NISPt2	22-24m	1710	1281539	543636
NISPt2	2-4m	153	1281539	543636
NISPt2	4-6m	258	1281539	543636

NISPt2	6-8m	132	1281539	543636
NISPt2	8-10m	52	1281539	543636
NISPt3	0-2m	272	1281550	543667
NISPt3	10-12m	316	1281550	543667
NISPt3	12-14m	103	1281550	543667
NISPt3	14-16m	94	1281550	543667
NISPt3	2-4m	14	1281550	543667
NISPt3	4-6m	235	1281550	543667
NISPt3	6-8m	660	1281550	543667
NISPt3	8-10m	501	1281550	543667
NISPt4	0-2m	60	1281580	543687
NISPt4	2-4m	56	1281580	543687
NISPt4	4-6m	54	1281580	543687
NISPt4	6-8m	194	1281580	543687
NISPt4	8-10m	26	1281580	543687
NISPt5	0-2m	7	1281561	543594
NISPt5	2-4m	17	1281561	543594
NISPt5	4-6m	21	1281561	543594
NISPt5	6-8m	8	1281561	543594
NISPt6	0-2m	54	1281534	543583
NISPt6	10-12m	17	1281534	543583
NISPt6	12-13m	14	1281534	543583
NISPt6	2-4m	25	1281534	543583
NISPt6	4-6m	13	1281534	543583
NISPt6	6-8m	11	1281534	543583
NISPt6	8-10m	16	1281534	543583
NISPt7	0-2m	7	1281500	543620
NISPt7	10-12m	94	1281500	543620
NISPt7	12-14m	2.5	1281500	543620
NISPt7	14-16m	2.5	1281500	543620
NISPt7	16-18m	2.5	1281500	543620
NISPt7	18-20m	11	1281500	543620
NISPt7	2-4m	51	1281500	543620
NISPt7	4-6m	554	1281500	543620
NISPt7	6-8m	60	1281500	543620
NISPt7	8-10m	17	1281500	543620
NITR1L1	0-2m	39	1279524	542209
NITR1L1	2-4m	25	1279524	542209
NITR1L1	4-6m	63	1279524	542209
NITR1L1	6-8m	14	1279524	542209
NITR1L2	0-2m	23	1279511	542210
NITR1L2	2-4m	38	1279511	542210
NITR1L2	4-4,5m	23	1279511	542210
NITR1L3	0-2m	357	1279485	542201
NITR1L3	2-4m	33	1279485	542201

NITR1L4	0-2m	-1	1279485	542205
NITR1L5	0-2m	7	1279475	542200
NITR1L5	2-2,5m	2.5	1279475	542200
NITR1L6	0-2m	9	1279465	542205
NITR1L6	2-3m	16	1279465	542205
NITR1L7	0-2m	10	1279455	542204
NITR1L7	2-3,3m	5	1279455	542204
NITR1L8	0-2m	8	1279445	542203
NITR1L8	2-4m	28	1279445	542203
NITR1L8	4-5m	27	1279445	542203
NITR2L1	0-2m	8	1279538	542570
NITR2L1	2-2,2m	-1	1279538	542570
NITR2L2	0-2m	5	1279536	542560
NITR2L3	0-2m	10	1279539	542550
NITR2L4	0-2m	4	1279537	542540
NITR2L4	2-4m	36	1279537	542540
NITR2L5	0-2m	7	1279538	542491
NITR2L5	2-3m	2.5	1279538	542491
NITR2L6	0-2m	9	1279532	542480
NITR2L6	2-4m	16	1279532	542480
NITR2L7	0-2m	8	1279532	542470
NITR2L7	2-4m	5	1279532	542470
NITR2L7	4-6m	8	1279532	542470
NITR3L1	0-2m	16	1279240	541902
NITR3L1	2-4m	13	1279240	541902
NITR3L1	4-6m	30	1279240	541902
NITR3L2	0-2m	21	1279235	541902
NITR3L2	2-4m	75	1279235	541902
NITR3L2	4-6m	16	1279235	541902
NITR3L2	6-8m	11	1279235	541902
NITR3L3	0-2m	179	1279225	541902
NITR3L3	2-4m	11	1279225	541902
NITR3L3	4-6m	12	1279225	541902
NITR3L4	0-2m	26	1279215	541902
NITR3L4	2-4m	25	1279215	541902
NITR3L4	4-6m	16	1279215	541902

APPENDIX 2. 2010 RAB DRILLING RESULTS

Hole_ID	East	North	RL	EOH	Dip	Azimuth
RA-N-10-01	545124.00	1274797.00	425.00	80.0	-55	270
RA-N-10-02	545179.00	1274800.00	417.00	41.0	-55	270
RA-N-10-03	545226.00	1274800.00	413.00	76.0	-55	270
RA-N-10-04	545275.00	1274800.00	412.00	74.0	-50	270
RA-N-10-05	545325.00	1274800.00	414.00	54.0	-50	270
RA-N-10-06	545100.00	1274400.00	426.00	74.0	-50	270
RA-N-10-07	545150.00	1274400.00	415.00	34.0	-50	270
RA-N-10-08	545250.00	1274400.00	403.00	30.0	-50	270
RA-N-10-09	545300.00	1274400.00	402.00	74.0	-50	270
RA-N-10-10	545200.00	1274200.00	401.00	76.0	-50	270
RA-N-10-100	542400.00	1279400.00	409.00	60.0	-50	270
RA-N-10-101	542448.00	1279400.00	404.00	51.0	-50	270
RA-N-10-102	542506.00	1279400.00	405.00	72.0	-50	270
RA-N-10-103	542550.00	1279400.00	391.00	70.0	-50	270
RA-N-10-104	542600.00	1279400.00	388.00	63.0	-50	270
RA-N-10-105	542650.00	1279400.00	390.00	78.0	-50	270
RA-N-10-106	542700.00	1279400.00	393.00	76.0	-50	270
RA-N-10-107	542755.00	1279400.00	390.00	80.0	-50	270
RA-N-10-108	542797.00	1279400.00	390.00	47.0	-50	270
RA-N-10-109	542850.00	1279400.00	387.00	70.0	-50	270
RA-N-10-11	545240.00	1274202.00	404.00	52.0	-65	270
RA-N-10-110	542895.00	1279400.00	385.00	66.0	-50	270
RA-N-10-111	542050.00	1279800.00	409.00	76.0	-50	270
RA-N-10-112	542100.00	1279800.00	408.00	75.0	-50	270
RA-N-10-113	542150.00	1279800.00	402.00	75.0	-50	270
RA-N-10-114	542200.00	1279800.00	401.00	75.0	-50	270
RA-N-10-115	542250.00	1279800.00	399.00	53.0	-50	270
RA-N-10-116	542300.00	1279800.00	404.00	76.0	-50	270
RA-N-10-117	542350.00	1279800.00	400.00	75.0	-50	270
RA-N-10-118	542400.00	1279800.00	398.00	59.0	-50	270
RA-N-10-119	542460.00	1279800.00	403.00	14.0	-50	270
RA-N-10-12	544800.00	1274000.00	376.00	74.0	-50	270
RA-N-10-120	542300.00	1280200.00	384.00	45.0	-50	270
RA-N-10-121	542350.00	1280200.00	384.00	60.0	-50	270
RA-N-10-122	542400.00	1280200.00	382.00	48.0	-50	270
RA-N-10-123	542450.00	1280200.00	380.00	63.0	-50	270
RA-N-10-124	542500.00	1280200.00	378.00	39.0	-50	270
RA-N-10-125	542550.00	1280200.00	380.00	48.0	-50	270
RA-N-10-126	544716.00	1282600.00	409.00	63.0	-50	270
RA-N-10-127	544770.00	1282600.00	408.00	76.0	-50	270
RA-N-10-128	544820.00	1282600.00	411.00	76.0	-50	270
RA-N-10-129	544854.00	1282600.00	419.00	75.0	-50	270
RA-N-10-13	544850.00	1274000.00	378.00	46.0	-50	270

RA-N-10-130	544920.00	1282600.00	415.00	68.0	-50	270
RA-N-10-131	544970.00	1282600.00	428.00	76.0	-50	270
RA-N-10-132	543992.00	1282400.00	383.00	34.0	-50	270
RA-N-10-133	544050.00	1282400.00	384.00	21.0	-50	270
RA-N-10-134	544100.00	1282400.00	392.00	34.0	-50	270
RA-N-10-135	544150.00	1282400.00	396.00	56.0	-50	270
RA-N-10-136	544200.00	1282400.00	399.00	70.0	-50	270
RA-N-10-137	543970.00	1282400.00	377.00	69.0	-50	270
RA-N-10-138	543920.00	1282400.00	381.00	48.0	-50	270
RA-N-10-139	543650.00	1282200.00	366.00	14.0	-50	270
RA-N-10-14	544900.00	1274000.00	381.00	24.0	-50	270
RA-N-10-140	543698.00	1282200.00	369.00	23.0	-50	270
RA-N-10-141	543750.00	1282200.00	364.00	14.0	-50	270
RA-N-10-142	543800.00	1282200.00	368.00	42.0	-50	270
RA-N-10-143	543850.00	1282200.00	370.00	30.0	-50	270
RA-N-10-144	543900.00	1282200.00	372.00	41.0	-50	270
RA-N-10-145	543950.00	1282200.00	377.00	28.0	-50	270
RA-N-10-146	544000.00	1282200.00	377.00	36.0	-50	270
RA-N-10-147	544052.00	1282200.00	381.00	57.0	-50	270
RA-N-10-148	544100.00	1282200.00	381.00	39.0	-50	270
RA-N-10-149	542175.00	1281500.00	382.00	42.0	-50	270
RA-N-10-15	544949.00	1274001.00	381.00	74.0	-55	270
RA-N-10-150	542225.00	1281500.00	384.00	48.0	-50	270
RA-N-10-151	543500.00	1281300.00	391.00	69.0	-50	270
RA-N-10-152	543559.00	1281300.00	394.00	48.0	-50	270
RA-N-10-153	543598.00	1281300.00	390.00	72.0	-50	270
RA-N-10-154	543598.00	1281300.00	390.00	72.0	-50	90
RA-N-10-155	543552.00	1281300.00	392.00	65.0	-60	90
RA-N-10-156	543500.00	1281300.00	391.00	45.0	-50	90
RA-N-10-157	543660.00	1281300.00	387.00	72.0	-50	270
RA-N-10-158	543700.00	1281300.00	387.00	59.0	-50	270
RA-N-10-159	543740.00	1281300.00	375.00	75.0	-50	270
RA-N-10-16	545000.00	1274000.00	382.00	66.0	-55	270
RA-N-10-160	543800.00	1281300.00	375.00	63.0	-50	270
RA-N-10-161	543830.00	1281300.00	374.00	71.0	-50	270
RA-N-10-162	543910.00	1281300.00	373.00	48.0	-50	270
RA-N-10-163	542220.00	1279200.00	389.00	13.0	-50	270
RA-N-10-164	542250.00	1279200.00	393.00	31.0	-50	270
RA-N-10-165	542280.00	1279200.00	392.00	36.0	-50	270
RA-N-10-166	542310.00	1279200.00	393.00	42.0	-50	270
RA-N-10-167	542190.00	1279200.00	402.00	75.0	-50	270
RA-N-10-168	542220.00	1279600.00	402.00	72.0	-50	270
RA-N-10-169	542250.00	1279600.00	403.00	75.0	-50	270
RA-N-10-17	545050.00	1274000.00	382.00	72.0	-55	270
RA-N-10-170	542280.00	1279600.00	405.00	75.0	-50	270

RA-N-10-171	542190.00	1279600.00	402.00	60.0	-50	90
RA-N-10-172	542220.00	1279600.00	402.00	72.0	-50	90
RA-N-10-173	542250.00	1279600.00	403.00	75.0	-50	90
RA-N-10-18	545100.00	1274000.00	387.00	42.0	-50	270
RA-N-10-19	545150.00	1274000.00	388.00	48.0	-50	270
RA-N-10-20	545200.00	1274000.00	388.00	72.0	-50	270
RA-N-10-21	545250.00	1274000.00	385.00	74.0	-50	270
RA-N-10-22	544900.00	1273600.00	363.00	30.0	-50	270
RA-N-10-23	544950.00	1273600.00	363.00	18.0	-50	270
RA-N-10-24	545000.00	1273600.00	362.00	48.0	-50	270
RA-N-10-25	545050.00	1273600.00	366.00	48.0	-50	270
RA-N-10-26	545303.00	1274000.00	396.00	74.0	-60	270
RA-N-10-27	543470.00	1281500.00	397.00	74.0	-50	270
RA-N-10-28	543520.00	1281500.00	389.00	74.0	-50	270
RA-N-10-29	543570.00	1281500.00	388.00	74.0	-50	270
RA-N-10-30	543620.00	1281500.00	385.00	30.0	-50	270
RA-N-10-31	541910.00	1281600.00	388.00	48.0	-50	270
RA-N-10-32	541960.00	1281600.00	391.00	38.0	-50	270
RA-N-10-33	542000.00	1281600.00	391.00	48.0	-50	270
RA-N-10-34	542060.00	1281600.00	390.00	48.0	-50	270
RA-N-10-35	542100.00	1281500.00	386.00	14.0	-50	270
RA-N-10-36	542150.00	1281500.00	388.00	44.0	-55	270
RA-N-10-37	542200.00	1281500.00	389.00	66.0	-50	270
RA-N-10-38	542250.00	1281500.00	390.00	66.0	-50	270
RA-N-10-39	542300.00	1281500.00	388.00	27.0	-50	270
RA-N-10-40	542350.00	1281500.00	389.00	60.0	-50	270
RA-N-10-41	542400.00	1281500.00	393.00	64.0	-50	270
RA-N-10-42	542450.00	1281500.00	398.00	74.0	-50	270
RA-N-10-43	542500.00	1281500.00	395.00	36.0	-50	270
RA-N-10-44	542550.00	1281500.00	396.00	66.0	-50	270
RA-N-10-45	542600.00	1281500.00	393.00	74.0	-50	270
RA-N-10-46	542650.00	1281500.00	393.00	66.0	-50	270
RA-N-10-47	542700.00	1281500.00	393.00	51.0	-50	270
RA-N-10-48	542200.00	1281900.00	386.00	62.0	-50	270
RA-N-10-49	542250.00	1281900.00	386.00	42.0	-50	270
RA-N-10-50	542300.00	1281900.00	385.00	44.0	-50	270
RA-N-10-51	542350.00	1281900.00	385.00	48.0	-50	270
RA-N-10-52	542400.00	1281900.00	383.00	72.0	-50	270
RA-N-10-53	542450.00	1281900.00	384.00	60.0	-50	270
RA-N-10-54	542496.00	1281900.00	382.00	66.0	-50	270
RA-N-10-55	542550.00	1281900.00	381.00	66.0	-50	270
RA-N-10-56	542600.00	1281900.00	381.00	36.0	-50	270
RA-N-10-57	543610.00	1281600.00	382.00	74.0	-50	270
RA-N-10-58	543660.00	1281600.00	382.00	24.0	-50	270
RA-N-10-59	543704.00	1281600.00	381.00	74.0	-50	270

RA-N-10-60	543380.00	1281100.00	381.00	66.0	-50	270
RA-N-10-61	543430.00	1281100.00	381.00	75.0	-50	270
RA-N-10-62	543490.00	1281100.00	379.00	58.0	-50	270
RA-N-10-63	543530.00	1281100.00	382.00	75.0	-50	270
RA-N-10-64	543580.00	1281100.00	382.00	67.0	-50	270
RA-N-10-65	543200.00	1280900.00	391.00	15.0	-50	270
RA-N-10-66	543250.00	1280900.00	366.00	44.0	-50	270
RA-N-10-67	543300.00	1280900.00	373.00	32.0	-50	270
RA-N-10-68	543350.00	1280900.00	374.00	45.0	-50	270
RA-N-10-69	543418.00	1280900.00	371.00	67.0	-50	270
RA-N-10-70	543455.00	1280900.00	375.00	30.0	-50	270
RA-N-10-71	541595.00	1277800.00	389.00	42.0	-50	270
RA-N-10-72	541650.00	1277800.00	391.00	62.0	-50	270
RA-N-10-73	541700.00	1277800.00	387.00	60.0	-50	270
RA-N-10-74	541750.00	1277800.00	388.00	54.0	-50	270
RA-N-10-75	541800.00	1277800.00	390.00	52.0	-50	270
RA-N-10-76	541855.00	1277800.00	376.00	39.0	-50	270
RA-N-10-77	541905.00	1277800.00	388.00	12.0	-50	270
RA-N-10-78	541810.00	1278600.00	390.00	63.0	-50	270
RA-N-10-79	541850.00	1278600.00	397.00	36.0	-50	270
RA-N-10-80	541900.00	1278600.00	398.00	54.0	-50	270
RA-N-10-81	541950.00	1278600.00	398.00	42.0	-50	270
RA-N-10-82	542000.00	1278600.00	397.00	76.0	-50	270
RA-N-10-83	541750.00	1278200.00	381.00	18.0	-50	270
RA-N-10-84	541800.00	1278200.00	386.00	22.0	-50	270
RA-N-10-85	541850.00	1278200.00	381.00	12.0	-50	270
RA-N-10-86	541900.00	1278200.00	383.00	14.0	-50	270
RA-N-10-87	541800.00	1279000.00	402.00	69.0	-50	270
RA-N-10-88	541850.00	1279000.00	407.00	61.0	-50	270
RA-N-10-89	541900.00	1279000.00	401.00	58.0	-50	270
RA-N-10-90	541950.00	1279000.00	406.00	45.0	-50	270
RA-N-10-91	542000.00	1279000.00	406.00	81.0	-50	270
RA-N-10-92	542050.00	1279000.00	405.00	71.0	-50	270
RA-N-10-93	542100.00	1279000.00	407.00	43.0	-50	270
RA-N-10-94	542150.00	1279000.00	401.00	39.0	-50	270
RA-N-10-95	542200.00	1279000.00	402.00	32.0	-50	270
RA-N-10-96	542200.00	1279400.00	410.00	72.0	-50	270
RA-N-10-97	542250.00	1279400.00	410.00	72.0	-50	270
RA-N-10-98	542301.00	1279400.00	404.00	57.0	-50	270
RA-N-10-99	542350.00	1279400.00	405.00	90.0	-50	270