A PRELIMINARY ASSESSMENT OF THE TOCANTINZINHO GOLD PROJECT, TAPAJÓS GOLD DISTRICT, PARÁ STATE, BRAZIL

September, 2007

Rodrigo Mello, P. Geo

TABLE OF CONTENTS

List of Tables

List of Figures

LIST OF ABBREVIATIONS

Abbreviation	Unit or Term
%	percent
^{o}	degrees of longitude, latitude, compass bearing or gradient
<	less than
>	greater than
AA	atomic absorption
Au	gold
^{o} C	degrees Celsius
cm	centimetre(s)
cm^3	cubic centimetre(s)
d	day
g	grams
Ga	billion years
g/cm^3	grams per cubic centimetre
g/t	grams per tonne
g/t Au	grams per tonne of gold
GPS	global positioning system
h	hour(s)
ha	hectare(s)
HP	horse power
IRR	internal rate of return
in	inch(es)
kg	kilogram(s)
Koz	thousand ounces
kV	KiloVolt
kWh	kilowatt hour
kg/t	kilograms per tonne
km	kilometre(s)
M	million(s)
m	metre(s)
m/s	metres per second
m^3	cubic metre(s)
m^3/s	cubic metres per second
masl	metres above sea level
mg	milligram(s)
mm	millimetre(s)
Mt	million tonnes
Mt/y	million tonnes per year
N	north
NPV	net present value
oz	ounce(s)
oz/d	ounces per day
oz/t	ounces per tonne
ppb	parts per billion
ppm	parts per million
R	Brazilian Real

RC	reverse circulation
s	second
S	south
SAG	semi-autogenous grinding
SG	specific gravity
t	tonne(s)
Mtpa	Million tonnes per annum
t/m^3	tonnes per cubic metre
US	United States
US$	US dollar(s)
US$/oz	US dollars per ounce
UTM	universal transverse mercator
US$/t	US dollars per tonne
W	west

1. SUMMARY

Tocantinzinho is located in the State of Pará in Northern Brazil, in the Tapajós Gold province, approximately, 200 km south-southwest of the city of Itaituba. It is a gold deposit, which has been in production by artisanal miners (called here by the local name of garimpeiros) since the eighties, but whose true potential was unveiled by Brazauro Resources Corporation's Brazilian subsidiary, Jaguar Resources do Brasil Ltda. Under the tailings of the hydraulic mining undertaken by the garimpeiros, a bulk tonnage deposit was discovered, measuring at least 700 m x 200 m in area.
At the request of Elton Pereira, Vice-President, Exploration of Brazauro Resources Corp. (Brazauro), NCL has been engaged to:

- Produce an updated mineral resources model;
- To estimate the resources contained within the economic envelope, using open cut optimizer software;
- To produce an economic assessment at the level of a scoping study (+/- 25% accuracy), considering the processing costs, infrastructure, power, environment and all costs related to the construction and operation of a gold mine in the Amazon region;
- To prepare a Technical Report that is in compliance with the requirements of the National Instrument 43-101.

To accomplish that, the following steps were required:

- A visit to site was carried out, to better understand the geology, sampling, mineralization and other aspects important for the updating of the mineral resources;
- Collect and analyze the information available and discuss with the site professionals;
- Contact external experts for infrastructure and mineral processing, to evaluate the data and estimate the requirements and its associated costs of each discipline;
- Consolidate the information into a complete economic assessment.

Mineral resources were estimated and classified according to the Australian JORC Code and are reported here in terms equivalent to those of the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) as required by Canadian National Instrument 43-101 (NI 43 101). Considering that JORC requires that mineral reserves should be defined only after a Pre-Feasibility report, no mineral reserves are defined in this scoping study. Since the objective is to estimate the economic potential of the deposit in order to support further investments, all the mineral resources, including the inferred, were used for the preparation of the production plan.
The Qualified Person who prepared this report, the mineral resource estimate and the economic appraisal was Rodrigo Mello, Senior Geologist and Project Manager with NCL Brasil. Mr. Mello has 21 years of experience in the mining industry. He has experience in this style of mineralization, having worked with gold deposits in Proterozoic hydrothermally altered zones in Minas Gerais (Nova Lima Group, several deposits), Goiás (Crixás mine), Amapá (Amapari mine), all in Brazil, and Mali (Yatela and Sadiola mines).
Other professionals from NCL, involved in this work were: Priscila Venturini, Gabriel Negrini, geologist; Julio Faria, Carlos Guzman and Antonio Couble, mining engineers.

External consultants engaged were Antonio Gadelha, civil engineer and infrastructure consultant, and Luis Bernal, metallurgic engineer.

1.1 MINERAL RESOURCES AND RESERVES

Mineral resources, as set out in Table 1, were estimated and classified according to the Australian JORC Code and are reported here in terms equivalent to those of the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) as required by Canadian National Instrument 43-101 (NI 43 101). Considering that this study is not a pre-feasibility study or a feasibility study, no reserves are defined in this report.

	Volume M3x1000	Tonnage ktons	Grade Au g/t	Gold Content Kg	Gold Content koz
Indicated	9,245	24,597	1.33	32,756	1,053
Inferred	10,760	27,704	1.18	32,604	1,048

Table 1 - Mineral Resource Statement

To assess the economic potential of the deposit, all resources, including the inferred, were considered in the pit optimization software and subsequent mine planning and cash flow preparation. The oxide resources were not used for the mine planning due to the fact that the envisaged plant is not suited for this type of material. Other alternatives may recover the gold content of these resources in a profitable way, but none has been considered in this report. The total of resources considered as economical is depicted in the table below

	Ore ktons	**Grade Au g/t**	**Gold Content koz**
Indicated	20,717	1.48	984
Inferred	17,833	1.34	768

Table 2 - Mineral Resources contained in the economic pitshell and above cutoff

Cautionary Statement: *This economic assessment is based partially on Inferred Resources, and its accuracy does not match the pre-requisites of a Pre-Feasibility Study, which is the minimum requirement for the conversion of Measured and Indicated Resources into Reserves. This preliminary assessment includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the results of the preliminary assessment will be realized.*

1.2 BASIC INFORMATION ABOUT THE PROJECT

Geographic coordinates at the center of the Tocantinzinho property are 6º 03’S and 56º18’W (UTM 9,330,700N and 578,200E in zone 21M). The property is reached by either boat or small airplane transportation. Brazauro has built a camp at Tocantinzinho which can accommodate thirty individuals with lodging and board. Logging roads, extending from Highway BR 163, reach to within 10 kilometers of the property at this time.

The property is located within the Amazon Basin with distinct rainy and dry seasons. Annual rainfall averages between 1300 to 1400 mm with the bulk of the precipitation falling from January through April. Average midday temperatures are about 32º with cooler pleasant nights. The region has a lush jungle cover and has seen robust placer mining activities since the early 1970s. Tocantinzinho is in a hydraulically mined area where the removal of perhaps one million metric tonnes of laterite and saprolite by garimpeiros has exposed the subsurface stockwork mineralization in the walls and floors of mined pits. Shortly after the initiation of placer mining activities at Tocantinzinho, subsequent to a comprehensive study of the placer potential of the region by the Brazilian Geological Survey, a company by the name of Mineração Aurifera Ltd. applied for an exploration license on the eastern portion of the Tocantinzinho deposit in 1979. After a three-year period and several exploration extension periods, the company submitted its research report in 1985. This report was approved by the DNPM and the company applied for a mining license. The western portion of the known gold mineralization underlies a block of placer mining claims which have subsequently been advanced to the exploration license stage. Both properties, as well as other contiguous lands, a total of 43,840 hectares, are now controlled by Jaguar Resources Corporation.

Tocantinzinho is situated in the center of the Tapajós gold region, a 350 km. by 350 km area which has produced officially at least 7 million ounces of gold but possibly as much as 30-40 million ounces of placer gold. Virtually all gold production in the Tapajós district has been through placer mining from alluvial, enriched laterite, or from saprolite - decomposed bedrock. A number of major and junior mining and exploration companies have followed on the heels of the placer miners and are exploring the region for the hard-rock gold potential. In 1997-1999, Altoro Corp. explored the Tocantinzinho property.

1.3 EXPLORATION

Exploration work completed to date at the Tocantinzinho Project includes the establishment of a grid, geological mapping, channel sampling in the garimpeiro pits, geochemical studies, auger soil sampling, power auger drilling, geophysical investigations by ground and airborne magnetic surveying, and core drilling programs that have completed 71 holes for a total drilled depth of 17.237,37 meters. In addition, petrographic and metallurgical studies have been conducted on drill core by contracted consulting firms.

The area around Tocantinzinho is jungle-covered with a weathering profile of 2 to 10m of laterite overlying saprolite. A ferruginous zone lies near the base of the soil/laterite profile and commonly contains nodules and layers of ferricrete.

Soil sampling was conducted around the main garimpeiro workings and along lines and grids extending up to two km from the garimpeiro pits. Over 700 samples were collected between 1997 and 1999. Soil sampling programs outlined a highly anomalous area roughly 1000 meters long by up to 500 meters wide.

Four-hundred-seventy-six channel samples of saprolite (weathered bedrock) were collected from the various garimpeiro pits. There was not a systematic approach to the sample location, with samples taken from available garimpeiro working faces. Bondar Clegg assayed all channel samples. Maps are available showing the location of all of the samples.

A ground magnetometer survey was conducted along the established grid lines spaced 50 meters apart. A total of 10 east-west oriented lines of 600m each were surveyed. The data were processed by Rhiannon Morris, a consulting geophysicist with Howe Chile Limitada. Data were corrected and leveled.

A total of 87 power auger holes were drilled in 1998 for 1,318 meters, an additional 503 meters were drilled in 58 holes in 1999. The power augers were purchased from the manufacturer in Belo Horizonte, these drills were designed specifically for sampling laterite/saprolite to a depth of 30 meters and, in general, functioned well with perforation rates of 15 to 20 meters per day.
In addition, Jaguar, a subsidiary of Brazauro, has three more areas in the region, Crepori and Bom Jardim, northwest of Tocantinzinho, and Sucuri to the South, which has significant exploration potential.

1.4 CONCLUSIONS AND RECOMMENDATIONS

From the results of this work, a feasible gold deposit has been outlined, subject to the uncertainties inherent to the level of the study, a scoping assessment, and to the category of the indicated and inferred resources, used in the mine plan and cash flow projection. Despite that, there is solid indication that the project deserves additional investments to enhance its category to an advanced stage project. The project economics are sensitive to gold price and metallurgical recovery, primarily. Therefore, it is important that infill drilling should be performed in order to upgrade the quality of the resources, and bulk sampling should be used to increase the confidence of the expected recoveries. Further engineering work would increase the accuracy of the cost estimates, and environmental study program should start immediately, considering that this aspect is a key one in order to bring a project to production in a timely manner. Considering that, NCL recommends that a pre-feasibility study should be undertaken to confirm the results presented in this scoping study and to ensure enough financing for the expenses of a full feasibility study and subsequent project development.

2. INTRODUCTION AND TERMS OF REFERENCE

Tocantinzinho is located in the State of Pará in Northern Brazil, in the Tapajós Gold province, approximately, 200 km south-southwest of the city of Itaituba. It is a gold deposit, which has been in production by artisanal miners (called here by the local name of garimpeiros) since the eighties, but whose true potential was unveiled by Brazauro Resources Corporation's subsidiary, Jaguar Resources do Brasil Ltda. Under the tailings of the hydraulic mining undertaken by the garimpeiros, a bulk tonnage deposit was discovered, measuring at least 700 m x 200 m in extension.

At the request of Elton Pereira, Vice-President, Exploration of Brazauro Resources Corp. (Brazauro), NCL has been engaged to:

- Produce an updated mineral resources model;
- To estimate the resources contained within the economic envelope, using open cut optimizer software;
- To produce an economic assessment at the level of a scoping study (+/- 25% accuracy), considering the processing costs, infrastructure, power, environment and all costs related to the construction and operation of a gold mine in the Amazon region;
- To prepare a Technical Report that is in compliance with the requirements of the National Instrument 43-101.

To accomplish that, the following steps were required:

- A visit to site was carried out, to better understand the geology, sampling, mineralization and other aspects important for the updating of the mineral resources;
- Collect and analyze the information available and discuss with the site professionals;
- Contact external experts for infrastructure and mineral processing, to evaluate the data and estimate the requirements and its associated costs of each discipline;
- Consolidate the information into a complete economic assessment.

Mineral resources were estimated and classified according to the Australian JORC Code and are reported here in terms equivalent to those of the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) as required by Canadian National Instrument 43-101 (NI 43 101). Considering that JORC requires that mineral reserves should be defined only after a Pre-Feasibility report, no mineral reserves are defined in this scoping study. Since the objective is to estimate the economic potential of the deposit in order to support further investments, all the mineral resources, including the inferred, were used for the preparation of the production plan.

The Qualified Person who prepared this report, the mineral resource estimate and the economic appraisal was Rodrigo Mello, Senior Geologist and Project Manager with NCL Brasil. Mr. Mello has 21 years of experience in the mining industry. He has experience in this style of mineralization, having worked with gold deposits in Proterozoic hydrothermally altered zones in Minas Gerais (Nova Lima Group, several deposits), Goiás (Crixás mine), Amapá (Amapari mine), all in Brazil, and Mali (Yatela, Sadiola mines).

Other professionals from NCL, involved in this work were: Priscila Venturini, Gabriel Negrini, geologist; Julio Faria, Carlos Guzman and Antonio Couble, mining engineers.

External consultants engaged were Antonio Gadelha, civil engineer and infrastructure consultant, and Luis Bernal, metallurgic engineer.

3. DISCLAIMER

NCL relied on exploration and technological data supplied by Brazauro Resources Corp. to produce this report. NCL has reviewed and evaluated the data pertaining to the mineralization found at the Tocantinzinho deposit that was provided to it by Brazauro and their consultants, and has drawn its own conclusions therefrom.

The geological, mineralization and exploration techniques (items 5 to 13) used in this report are taken from reports and internal memorandums prepared for Brazauro, in special the November 2006 technical report by PAH. The items 16 and 18.3, containing the metallurgical results and cost estimates, were prepared by Luis Bernal, a metallurgy consultant. The item 18.5, infrastructure, was prepared by the infrastructure consultant, Antonio Gadelha.

The status of the mining claim under which Brazauro holds title to the mineral rights for this property has been investigated by NCL only by consulting the systems of DNPM (the public agency for mineral control), which reports the property as regular and belonging to Jaguar Resources do Brasil Ltda, or to Mineracao Cachambix, a company acquired by Brazauro in 2007, as NCL was informed by Brazauro. No further investigation was done and NCL does not guarantee that any liability or litigation could prevent Brazauro to explore the property.

A reasonable amount of confirmatory testing and verification has been accomplished. Although NCL believes that all the information provided in this report is accurate, it is possible that some problems were not detected, and may have been used in this evaluation. NCL does however represent that the information was evaluated and put together in good faith.

4. PROPERTY DESCRIPTION AND LOCATION

The Tocantinzinho exploration property consists of 43,840 hectares (438 km2) of land located in the State of Pará, of northern Brazil. Brazauro Resources Corporation holds other mineral concessions in the State of Pará, to the south and west of Tocantinzinho, named Sucuri, Crepori and Bom Jardim, that were not visited by NCL staff.

The Tocantinzinho exploration property consists of a contiguous block of six exploration and mining concessions that include optioned exploration rights and agreements to acquire exploration licenses, as well as a mining license, all registered with the Departamento Nacional de Produção Mineral (“DNPM”) by Brazauro’s wholly-owned.

The Tocantinzinho exploration project is in the locality of Bacia do Rio Tocantins, in the Municipality of Itaituba, district of Itaituba, in the Tapajós gold region. This region has been mined by garimpeiros since the late 1950s. It is estimated that about one million cubic meters of gold bearing laterite and saprolite (Orequest, July 10, 2003) have been mined out from the immediate Project area. Altoro Gold Corp., a wholly owned subsidiary of Solitario Resources Corp. since 2000, explored the Tocantinzinho property from 1997 to 1999 with exploration work consisting of the establishment of a grid, geological mapping, channel sampling in the garimpeiro pits, auger soil sampling, power auger drilling, and a ground magnetometer survey. In addition, some regional mapping and sampling were completed.

Brazauro Resources Corporation acquired the Tocantinzinho property in July 2003 and has actively explored the property since that time. Its first drill hole made the discovery of extensive stockwork-hosted gold mineralization below the placer workings. Subsequent drilling by Brazauro has outlined the mineralized body which is the subject of this report.

The drilled gold-mineralization at Tocantinzinho is located on either side of a north-south-trending boundaryline between an exploration license and land which is at the mining application stage, both held by Brazauro, in an area that still contains a handful of garimpos, basically two to three-man gold placer operations. Exploration programs, including three drilling campaigns in the Project area, have indicated a gold-mineralized zone that remains open at depth and laterally for further investigations. The mineralized area contains disseminated gold in association with traces of lead and copper minerals within a stockwork zone hosted by granitic rocks of Lower Proterozoic age.

4.1 LOCATION

The Tocantinzinho Project is situated at an elevation of 120 meters above sea level approximately 200 kilometers South/Southwest of the city of Itaituba, and approximately 1,150 kilometers in a S60ºW bearing from Belem, the capital city of Pará State located along the north seacoast of Brazil at the mouth of the Amazon River.

The Project’s location can be found on the central northern part of the 1:250,000 Vila Riozinho (Folha SB.21-Z-A, MIR-194) Brazilian topographic map sheet.

Approximate coordinates of the center of the Tocantinzinho Project area are as follows:

Geographic : S - 06º 03’ W - 56º 18’

UTM : Zone 21M : N - 9,330,700 E - 578,200

The Tocantins River, as well as numerous other small streams, transects the Property. Rio Tocantins, a tributary to the Amazon River, meanders within a half-kilometer of the center of mineralization at Tocantinzinho and allows access to the Property by small motor boats. The Rio Tocantins flows towards the north and joins the Jamanxim River, which in turn flows into the majestic Tapajós River, one of the largest tributaries of the Amazon River. Diamond drilling equipment and fuel are brought to the property by boat along the river.

Itaituba, the local center for services and supplies, is located on the north bank of the Tapajós River. The Cuiabá-Santarém (Highway 163), extending northward from the state of Mato Grosso, reaches Itaituba via a ferry crossing of the Tapajós River. Most heavy equipment and supplies reach Itaituba by smaller ships which move along the Tapajós River. The Tapajós River joins with the main Amazon River at the city of Santarem 200 kilometers northeast of Itaituba.

Road access is not yet available to the Property but active logging roads reach to within 12 kilometers of Tocantinzinho and a road connection could be easily made. These logging roads extend from Mamoal, a small garimpeiro community about 40 kilometers to the southeast. An improved dirt road connects Mamoal with the Trans-Garimpeira Highway, which in turn meets with the Cuiabá-Santarém Highway just north of the community of Morais Almeida.

Two airstrips serve Tocantinzinho. One, called Pista Velha, is 350 meters long and is situated between the main mineralized zone and the Rio Tocantins. This airstrip is at a convenient location to the camp and is most frequently used to supply the camp with personnel and supplies. At the end of the airstrip there are a number of houses and two saloons. A second airstrip, called Pista Nações Unidas, is 500 meters long and is situated 2.0 kilometers due south of the camp. Heavier materials are hauled to and from the airstrips by means of a Honda ATV with an attached trailer.

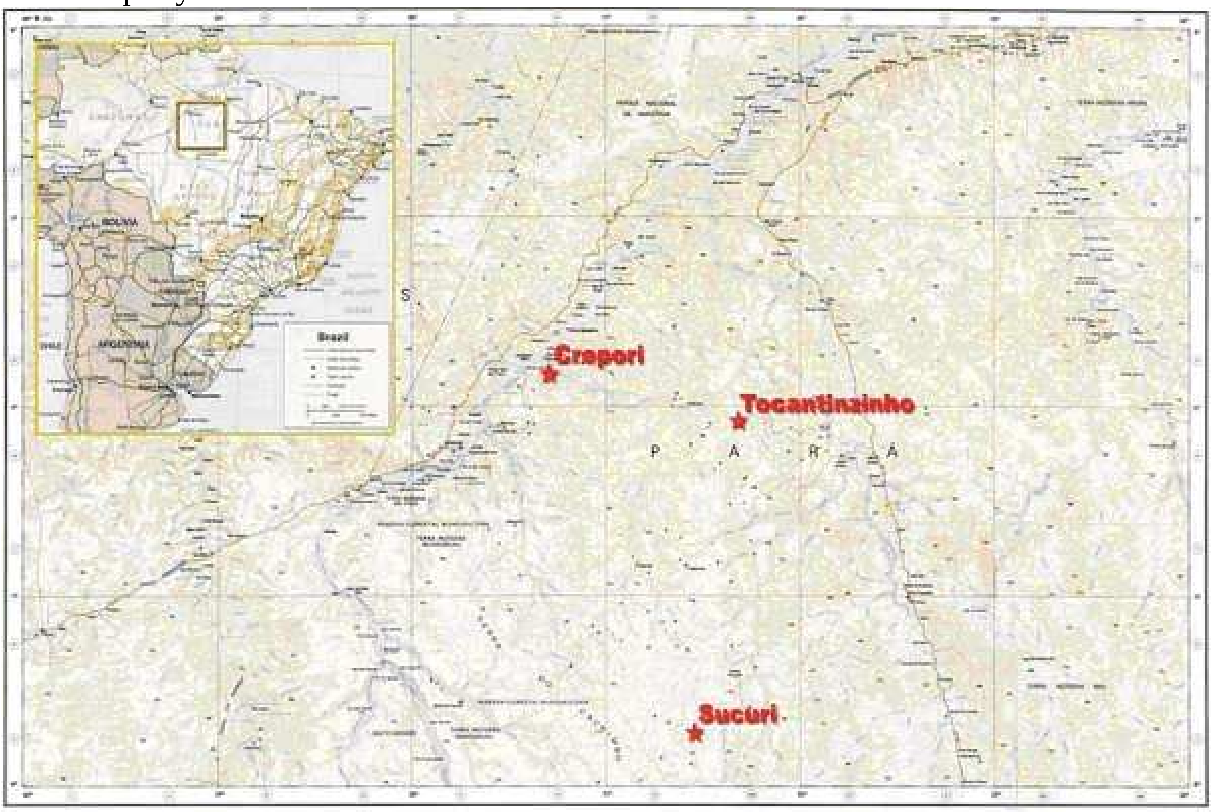


Figure 1 - Tocantinzinho Project Location Map.

4.2 PROJECT OWNERSHIP

The Tocantinzinho property consists of five exploration licenses and one mining license that encompass a total of 43,840 hectares. Legal mineral rights to these lands have been established by means of underlying option agreements. Of the five exploration licenses (Alvará de Pesquisa), four have been granted and published by the Departamento Nacional da Produção Mineral (DNPM) and one is in the application stage. The contiguous gold mineralized body outlined by drilling to date at Tocantinzinho lies on one of the granted and published license areas and extends onto the land that is covered by a mining license application. This mining application property consists of 10,000 hectares. Jaguar holds this concession under a purchase agreement from Mineração Aurifera Ltda (Aurifera, now renamed as Mineração Cachambix Ltda.) the underlying applicant of the concession.

.

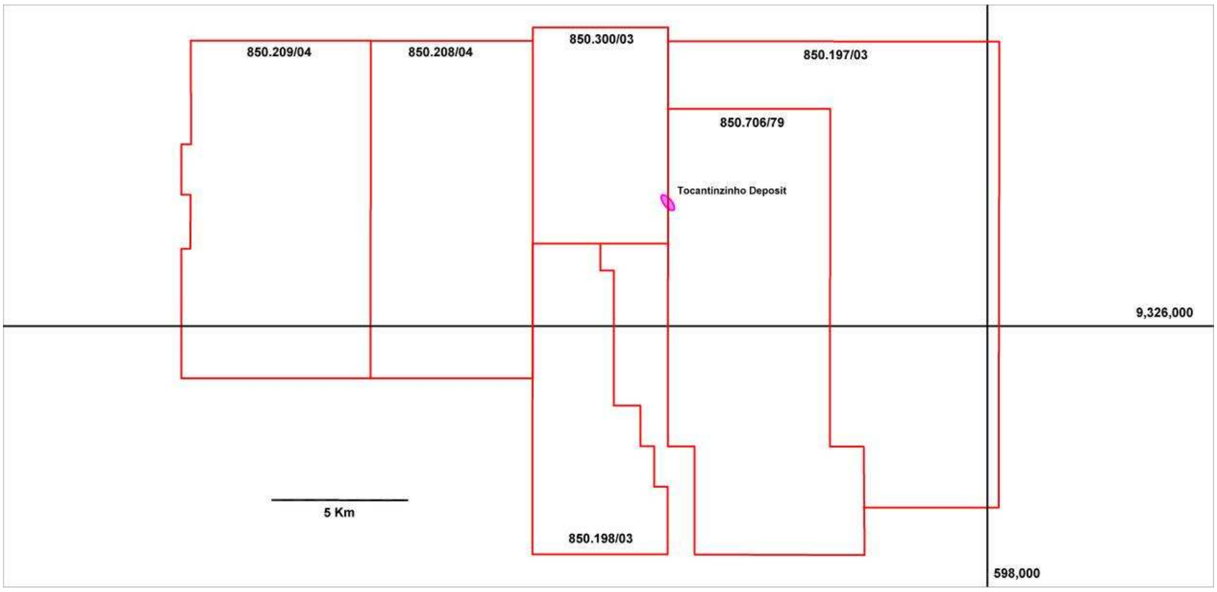


Figure 2 - Claims Map.

4.2.1 Details of the two properties holding the deposit

Tocantinzinho deposit is located on two different DNPM concessions. Part of the deposit is situated on concession 850.300/03, and the other part on concession 850.706/79:

Concession 850.300/03 (4.000 ha), originally was composed of 80 artisanal mine claims (50 ha each), owned by Manoel da Conceição Pinheiro, who applied for the areas in 17/07/1995. Moore & Carter made an underlying agreement with Manoel da Conceição Pinheiro, assuring ownership of the areas, and then in 2003 entered into an agreement with Brazauro (then "Star Resources Inc."). Those 80 artisanal mine claims were converted into an exploration concession, published on 01/04/05 which was then transferred to Jaguar Resources do Brasil, subsidiary of Brazauro. The acquisition of this property was made by the price of US$ 1.2 million in four installments. To date, US$ 260,000 has been paid and last payment, of US$ 940,000 is due for October/2007. The production in this property would imply in a production NSR royalty of 2.5% for a gold price minor than US$ 500/Oz and 3.5% for a gold price equal or greater than US$ 500/Oz.

Concession 850.706/79, owned by Mineração Cachambix., is a valid mining application license, dated of 1979. NCL was advised that in 2007 Jaguar acquired control of Mineração Cachambix for US$ 3 million. No royalty obligations are included in this agreement.

4.2.2 Other Obligations

In a separate arrangement, Brazauro has agreed to a US$400,000 finder's fee to be paid to an individual who brought to Brazauro's attention three areas to the East and South of Tocantinzinho (850.196/03, 850.197/03 and 850.198/03). Of this total, US$ 230,000 has been paid to date with the final payment due in November, 2007. Two of the exploration license concessions (850.208/04 and 850.209/04), located to the West and adjacent to the area of major interest, have been optioned by Brazauro from an individual. These two concessions cover an aggregate of 16,052 hectares. The Company has received the exploration license for these areas from the Brazilian regulatory authority (DNPM). Payments totaling $190,000 have been made, with the remaining payments being $110,000 scheduled to be paid in the years 2007 and 2008. No royalty obligations are included in this agreement.

Tocantinzinho Properties						
Previous Owners:	**Cachambix**	***Pinheiro***	***CarterMoore***	***Azevedo***	***Machado***	
License Numbers:	*850.706/03*	*850.300/03*	*850.300/04*	*850.196/03*	*850.208/04*	
				850.197/03	*850.209/03*	
				850.198/03		
	Tocantizinho SE	**Tocantizinho NW**	**Tocantizinho NW**	**East TZ**	**West TZ**	**Total**
Status	**US$**	**US$**	**US$**	**US$**	**US$**	**US$**
Paid to date	1,000,000	260,000	465,000	230,000	190,000	2,145,000
Due in 2007	-	940,000		170,000	45,000	1,155,000
Due in 2008	1,000,000	-		-	65,000	1,065,000
Due in 2009	1,000,000	-		-	-	1,000,000
Total Paid	**1,000,000**	**260,000**	**465,000**	**230,000**	**190,000**	**2,145,000**
Total debt	**2,000,000**	**940,000**	**-**	**170,000**	**110,000**	**3,220,000**
Grand Total	**3,000,000**	**1,200,000**	**465,000**	**400,000**	**300,000**	**5,365,000**

Table 3 - Payments for each property

4.3 ENVIROMENTAL LIABILITIES

The Tocantinzinho land disturbance consist primarily of garimpeiro workings, including shallow water-filled pits and small surface openings from which lateritic and saprolitic materials were extracted by hydraulic mining methods and processed by gravity concentration. All of Brazauro's exploration programs have been restricted to areas already affected by placer mining disturbances at Tocantinzinho, with insignificant effects caused by Brazauro's drilling and exploration activities. A limited amount of garimpeiro operations still survive at the property, but the miners are careful not to interfere with Brazauro's exploration activities. Traditional garimpeiro operations include amalgamation for gold recovery using mercury and some unpredictable environmental liability may possibly exist from previous placer mining operations. The placer tailings contain significant gold values and will probably be mined and milled at the beginning of any hard-rock gold mining operation at the property.

4.4 STATUS OF REQUIRED PERMITS

NCL did not review the status of the permitting and claim status; these statements are based on information provided by Brazauro.

Basic geological and geochemical exploration, including geological work, geochemical sampling, and small-scale line-cutting needs no permitting on public lands within the vast Garimpeiro Reserve of Brazil. Drilling activities on lands already disturbed by garimpeiro mining need no environmental permitting. Past drilling by Brazauro within the extensively placer-mined lands required no drilling permits. Future activity within the area of mineral resources discussed in this report is all within this extensively placer-mined zone and will not require permitting.

In 2005, Brazauro contracted Keystone Ltda. from Belem, Pará to produce a baseline environmental study at Tocantinzinho. This report has been submitted to the Para State´s environmental agency SECTAM (Secretaria Executiva de Ciênca, Tecnologia e Meio Ambiente). SECTAM issued, on October, 2005, an operation license for the exploration workings of Brazauro.

By presidential decree, on February 13, 2006, much of Pará State's Tapajós region, an area centered on the old Tapajós Garimpeiro Reserve, was reclassified. In effect, this region was put under Federal jurisdiction. Not considering lands which had already been classified or withdrawn in the region, the areas lands were classified into six major categories. The majority of the Garimpeiro Reserve land was classified as APA (Área de Proteção Ambiental), which is the least restrictive environmental classification and allows for mining and exploration activities. Brazauro's entire Tocantinzinho mineral land package falls within this land status and outside of any restricting effects resulting from proposed buffer zones around the most restrictive land blocks. The second least restrictive land classification is the FLONA (Floresta Nacional), which also permits mining activities but will receive more environmental scrutiny than the APA lands from the proper administrative agency.

Large areas of pristine jungle have been classified as PARNA (Parque Nacional) or national parks, where mining activities and logging are not permitted. There has been talk of a 10-kilometer radius buffer zone around the perimeter of national parks. This is in the assessment stage and would not affect the Tocantinzinho gold deposit as it is located far beyond a ten kilometers buffer zone of the nearest park, the Jamanxim National Park. The fourth classification of lands is the indigenous lands. These are for the most part under tribal jurisdiction and mining can only occur with special tribal permission. Two other land classifications, the REBIO and RESEX, are biological study and use areas where mining is also prohibited. None exist within the old Garimpeiro Reserve.

All permits for exploration and mining on Federal lands in the Tapajós region will be issued by IBAMA (Instituto Brasileiro do Meio Ambiente), the Federal environmental Agency. This agency is the administrative arm of the environmental ministry, the Ministerio do Meio Ambiente do Brasil. Because Pará is an independent minded state, with the largest mining operations of Brazil within it (iron ore and bauxite), there are negotiations in progress for Pará to take a more active role in future environmental matters within the State at the diminution of Federal involvement. At the present time, permits for building roads and clearing trees for exploration and drilling within lands under Federal jurisdiction, lands that have had no previous garimpeiro disturbance, must be obtained from IBAMA. There is an IBAMA office in Itaituba.

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

5.1 ACCESSIBILITY AND INFRASTRUCTURE

The Tocantinzinho property is located south of the Amazon River. To reach the property from Belem one travels 1,000 km west to Itaituba, a town at the crossing of the Tapajós River by the Trans-Amazonica Highway and the major supply post for the Tapajós region. The Tapajós River is a major tributary joining the Amazon River at Santarem. Several small regional airlines service Itaituba from Belem and Manaus to the West. To fly from Belem via Santarem to Itaituba is a 3½ hour trip. To fly from Manaus is a 1½ hour trip. Itaituba has several charter companies flying single engine aircraft into the Tapajós region

Tocantinzinho lies within the Rio Tocantins valley, about 200 km south southwest of Itaituba. Access is by single engine aircraft from Itaituba or aluminium boat along the Rio Jamanxim and Rio Tocantins, from a loading point at Aruri Grande on Highway BR-163. Itaituba is located at the intersection of the Trans-Amazonica Highway with the Tapajós River and there is a ferry crossing of the Tapajós. The Tocantins River, as well as numerous other small streams, transects the Tocantinzinho Project area. The general area drains to the north.

There are no roads within about 12 kilometers of the property. The region is serviced by a gravel road. Highway BR-163, a road that will apparently be paved in the near future runs south from just east of Itaituba to Mato Grosso State, passing 70 km to the east of the property. The Trans-Garimpeira Highway is located 50 kilometers south of the property and connects with BR-163 at the town of Morais Almeida.Numerous logging roads branch off the main roads and get closer to the property every year. Most of the rivers in the region are navigable during the wet season and provide better access than the roads. A road from the community of Rio Crepori which is located on a river that is navigable by larger barges during rainy season, to the community of Cuiú Cuiú, is located 30 km to the northwest of Tocantinzinho.

From Itaituba, small single-engine air charters are used to access a narrow 350m-long airstrip at the property. This flight to the property from Itaituba takes about one hour and is weather-dependent. The typical tropical afternoon rain can be a problem for flight departures and the pilot prefers to depart the property before 4 PM to be able to land comfortably at Itaituba before sundown.

5.2 PHYSIOGRAPHY, CLIMATE AND VEGETATION

Local physiography consists of somewhat rugged topography forming hills and valleys. Serra Leste is the highest point of land on the Tocantinzinho property and is about 50 meters above the surrounding drainages. Vegetation is typical of that found in a tropical jungle environment of the Amazon basin. The only areas not covered by jungle are those worked by the garimpeiros and the drainages filled by either tailings or swamps. The photography shown on Figure 3 demonstrates the physiography of the Project area.

The local climate has two well defined seasons, the rainy season from January to June, and the dry season from July to December. This climate is characteristic of much of the state of Pará. The average daytime temperature in the project area is 26.1º C. The temperatures don't vary significantly with maximum of 33°C and a minimum of

24.5°C. Relative humidity averages 75% with an annual range from 70% to 80%. Rainfall in the project area is about 1.370 mm per year.

Figure 3 - Aerial view of Tocantizinho Project

The project area is in the Tocantinzinho basin, which empties into Jamanxim basin. That basin empties into Tapajós which empties in Amazon river. The rivers near the area present rapids, sandy beds and are shallow, making navigation difficult.

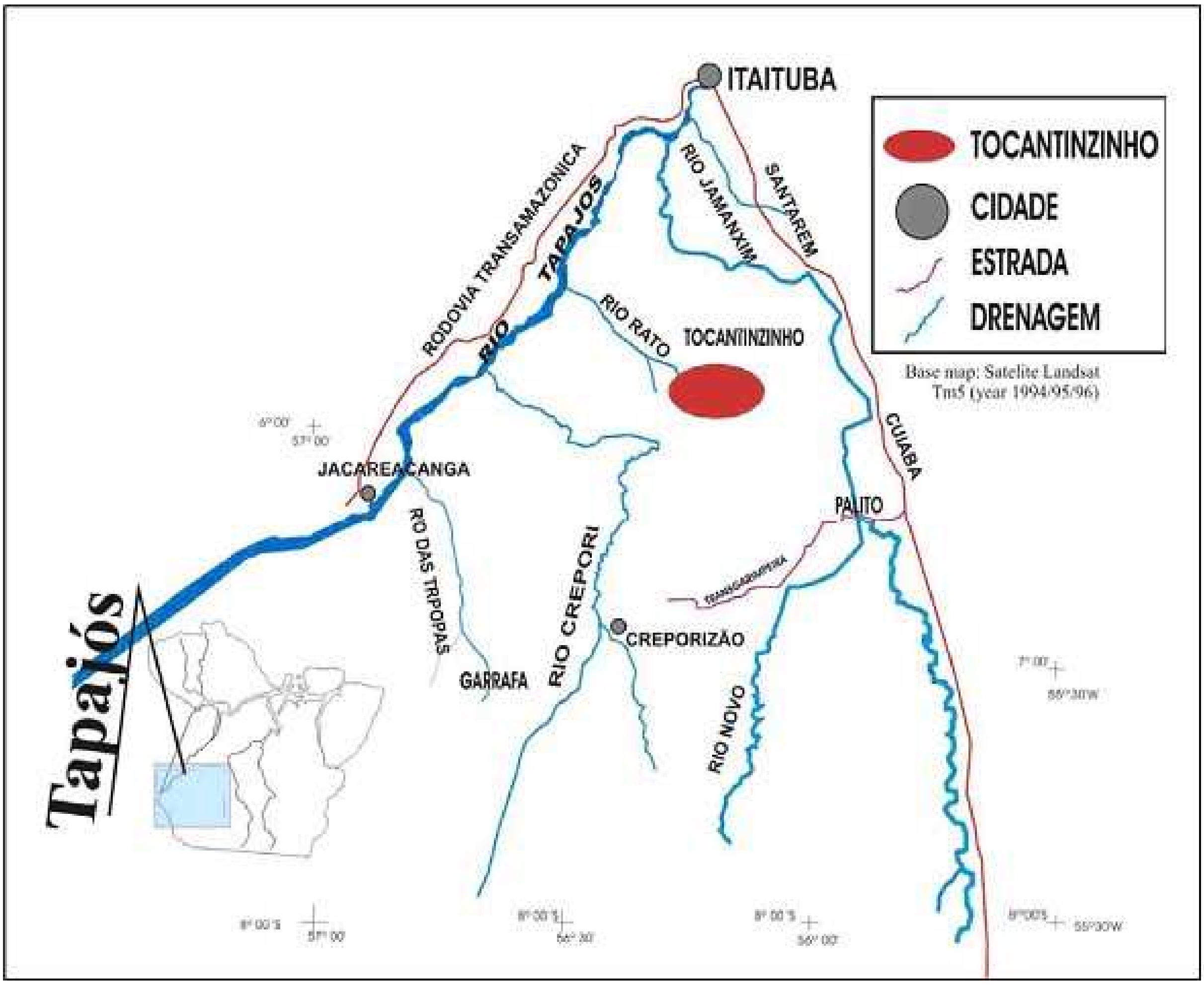


Figure 4 - Hydrographic Configuration

5.3 LOCAL RESOURCES

There are no permanent inhabitants within the boundaries of Brazauro's properties. However there are currently, about six to eight teams of local garimpeiros operating in some areas of Brazauro properties. The nearest town to Tocantinzinho with social services is Itaituba that has a population of 96,282 inhabitants (IBGE,2007). Banking, postal service, health services and communications, as well as education centers, and regular air service to other major cities, such as Belem, Manaus and Cuiabá, etc. are available at Itaituba. Labor required for Project development and operations will be brought into the Project from Itaituba and other Pará State cities.

Brazauro has verified that 72 km of roads would have to be repaired or built, on public lands. 57 Km of those are on existing roads, that need to be enlarged and prepared, and 15 km will have to be built.

Water for Tocantinzinho appears to be abundant with the Tocantins River within 1000 meters. No electric power is available within the Project's vicinity.

Fuel and other major supplies are currently brought into the Tocantinzinho area by water ways. People, food supplies and other items are brought into the area by small airplanes from Itaituba.

6. HISTORY

Gold is reported to have been first discovered in the region in 1747 but the area has only been a significant producer since the 1980s. The famous gold rush of the Tapajós region began about 1977 when garimpeiros poured into the region that was then wilderness. Production from the region apparently peaked in the late-1980s with as many as 500,000 garimpeiros extracting somewhere between 200,000 and one million ounces per year, during a period that represents the largest gold rush in the history of Brazil. Up until 1993, production was officially estimated at 16 million ounces (500 tonnes), but real production is unknown and may have been double that amount. In addition to gold, the district has produced tin, fluorite, diamonds, topaz and other precious gemstones from the alluvial production.

The district is still active with approximately 50,000 to 80,000 miners and is estimated to produce approximately 200,000 to 300,000 ounces annually. Typically in the area, consistent with other gold districts of the Brazilian Shield where alluvial gravels are mined or re-worked, the miners turn to primary mineralized veins and stockworks in laterites and saprolites in an attempt to work the primary sources of the rich alluvials. With increasing prices, the production in Brazil's main gold provinces has increased in 2004 with respect to 2003, by 36.3 percent in Pará, 52.1 percent in Rondônia, 50.2 percent in Mato Grosso, 54.3 percent in Amapá, and 11.4 percent in others areas for a total for all of Brazil of about 1.55 million ounces.

It appears that gold mining at Tocantinzinho was initiated by garimpeiros and production began in 1970 with the best years being in the mid-eighties; unfortunately, there are no published records to support the timing or amount of production.

Following evaluation of the placer potential of the immediate area of Tocantinzinho by the Brazilian Geological Survey (Compania Pesquisa Recursos Mineração) during the midst of the Tapajós gold rush, Mineração Aurifera Limitada obtained an exploration license over the Tocantinzinho mineralization in 1979. After several extensions of its exploration license (Alvara de Pesquisa) Aurifera filed its required research report with the Deprtamento Nacional de Produção Mineral (DNPM), which ended its exploration period in December 1986. The company then filed for a mining concession, a request which was not analysed by the DNPM. Aurifera lost interest in its property and the entire property files were shelved and archived by the DNPM in 1992. In 1995, Mr. Manuel da Conceição Pinhero received placer rights from the DNPM for the western part of the Tocantinzinho area. His block of placer claims were subsequently turned into a hard-rock exploration concession by Jaguar in 2003.

In 1997, Renison Goldfields (of Australia) and Altoro formed a Joint Venture to explore Brazil for major gold deposits. Altoro acted as both the manager and operator. The Tocantinzinho property was brought to the JV's attention by air charter pilot Vincente Luz, and acquired after a property visit by Dennis Moore who collected continuous channel samples of saprolite from two different garimpeiro pits 250-m apart. These samples returned results of 36 m of 2.68 ppm Au from the main pit and 21 m of 2.01 ppm Au from the northern pit. An option to purchase the Tocantinzinho property was signed October 15, 1997. On June 12, 1998 Altoro was advised by Renison Goldfields that they intended to withdraw from the Joint Venture due to a corporate decision to concentrate their activities on mineral sands and restrict gold exploration to near mine tenements in Australia. As a consequence, all properties, projects, and data acquired by the Joint Venture were passed to Altoro on July 12, 1998. Solitario Resources Corporation acquired Altoro in October 2000, but terminated the Tocantinzinho Project a year later due to the low gold price environment.

Altoro's exploration program at Tocantinzinho consisted of soil geochemistry, ground magnetic survey, channel sampling, geological mapping of the pits, and power auger drilling.

A camp was constructed on site and water was supplied from a nearby well. During Altoro's exploration work in 1998 and 1999, approximately 200 people were living at Tocantinzinho supported by garimpeiro activity. Of the 200 people, 60 to 70 were actively working garimpeiros. Relations between the garimpeiros and Altoro were reported to have been good. In several instances the garimpeiros modified their activities to facilitate mapping and sampling of the pits by Altoro technical staff.

The mining of laterite and saprolite is performed by hydraulic methods with gold recovery by sluice box. The method used consists of one pump to bring water to a working face and a second pump to recover the loosened material and run it over a sluice box. A mercury coated copper plate was seen in one sluice box. At the time of Altoro's work, up to 18 sets of pumps were operating at any one time, but at the time of the Orequest site visit in 2003, only four or five pumps and sluices were seen. Most of the material is washed as it is mined with no grinding or crushing involved.

The availability of water is a critical factor for the garimpeiro activity. The main garimpeiro workings in saprolite (Serra Leste) are in the headwaters of minor drainages so sufficient water to mine saprolite is not always available. In times of low water availability, the garimpeiros move their operations to lower areas and wash tailings and alluvials. The garimpeiros have located their sluices such that the tailings have formed dams across the main drainages and numerous large ponds are present retaining sufficient water for current operations, however, this water supply may not last into the dry season. Although water has been a concern for the artisan miners during the dry season with their style of gold extraction, the property and the area surrounding the property contain abundant sources of water for all usual exploration and development purposes.

In 2003, Brazauro's Brazilian subsidiary, Jaguar Resources do Brasil Ltda., acquired the properties covering the Tocantinzinho mineralization. Following geochemical soil sampling, Jaguar initiated a drilling program of 20 core holes of an average length of 227 meters. More core drilling phases followed the first and to date 71 core holes have been drilled at Tocantinzinho for a total of 17.237,37 meters.

7. GEOLOGICAL SETTING

The Tapajós gold region is situated in the south-central part of the vast Amazon Craton. The Craton is generally divided into two physiographic components: the Guyana Shield north of the Amazon River and the Brazilian Shield south of the river. However, geochronological and structural provinces have a northwestern trend and these provinces are continuous across the two shields. The Brazilian Shield has as its nucleous the Archean greenstone-granitoid terrane of the Carajás-Imataca Province in the east. The structural provinces become younger towards the west and are dominantly granitic rocks of Paleoproterozoic age in the region of Tocantinzinho.

7.1 REGIONAL GEOLOGY

In the Tapajós District, the oldest rocks are the gneisses, schists, and metagranites of the Cuiú-Cuiú complex (2,011-2,033 Ma), which is the local basement for all units present in the region. The Cuiu-Cuiu Complex is intruded by the granites and granodiorites of the Parauari Suite (1,957-1,997 Ma); tonalites, diorites and granodiorites of the Tropas Suite (1,898-1,907 Ma) and granites and granodiorites of the Creporizão Suite (1,853-1,893 Ma). The rocks of the Parauari, Tropas and Creporizão granitoids have calc-alkali afilliation and are considered as the roots of a magmatic arc. Another set of coeval intrusive and extrusive rocks cut all units above. The extrusives are rhyolites, dacites and andesites of the Bom Jardim and Salustiano Formations (1,853-1,900 Ma) and the volcaniclastics of the Aruri Formation (1,853-1,893 Ma). Intruding all above are the granites of the Maloquinha Suite (1,870-1,882 Ma), which are alkaline and considered as anorogenic. Subordinate mafic intrusive and extrusive rocks of the Ingarana Suite do occur (1,878-1,900 Ma), mainly in the central-north portion of the district. By looking at the geologic map of the Tapajós sheet (CPRM, 2004), one can observe that the central-NW portion of the district is domained by the Parauari granites, the SE portion is domained by the Creporizão granites and the eastern portion is domained by the Salustiano and Aruri volcanics. The Maloquinha granite is widespread intruding all units above it.

Gold mineralization is found in almost all rock types present in the Tapajós district. The known deposits and main occurrences are found in the Cuiu-Cuiu Complex (Cuiu-Cuiu), Parauari Suite (Tocantinzinho and Palito), Tropas Suite (Ouro Roxo), Creporizão Suite (São Jorge and Sucuri), Salustiano and Bom Jardim Formations (V3-Botica, Bom Jardim and Doze de Outubro) and even in the Maloquinha Suite (Mamoal).

In the immediate area of Tocantinzinho the most widespread igneous rocks are the granites and quartz-monzonites of the Parauari Suite. Rocks of the suite, dated at 1,883 Ga, are believed to be the predominant hosts to mineralization at Tocantinzinho. Following the emplacement of this suite of batholithic proportions, igneous activity changed to predominantly andesitic to basaltic character, perhaps by the onset of extensional tectonics. Extensive felsic volcanism followed, the Uatumã Volcanics, with the eruption of rhyolitic to dacitic flows and tuffs and their sister volcaniclastic sediments. The Uatumã Volcanics have been subdivided into the Iriri Group, the Aruri Formation and the Salustiano Formation. Dating of these rocks and associated mineral deposits, some showing remarkable near-surface erosion levels, has shown the age of these rocks to be about 1,874 Ga.

The volcanic rocks form a massive north-south extending band within this part of the Brazillian Shield. Though northwest-trending younger left-lateral faults have disrupted the volcanic rocks, nevertheless the original north-south extent of this field is still discernible. On the heels of this volcanism and intruding them is an intrusive suite of granitic rocks dated about 1870 Ma. These granitic bodies have been described as anorogenic and locally called the Maloquinha, Pepita, or Caroçal granitoids. Mineralization found in these predominantly granite or adamellite bodies tends to consist of deep-seated glassy to milky quartz, representing the root zones of vein systems, suggesting the granitic rocks to be the source of mineralization. The Maloquinha Granite is believed to represent the deeper intrusive phase of the Uatumã intrusive-volcanic event.

Younger highly indurated clastic sedimentary rocks cover the Maloquinha/Uatumã suite of rocks, generally as erosion-resistant caprocks or within west-northwest-trending graben-like structural features of the greater area. Younger volcanic, sedimentary, and igneous suites are prevalent far to the west of Tocantinzinho, all of which show U-Pb age dates between 1780 and 1757 Ma.

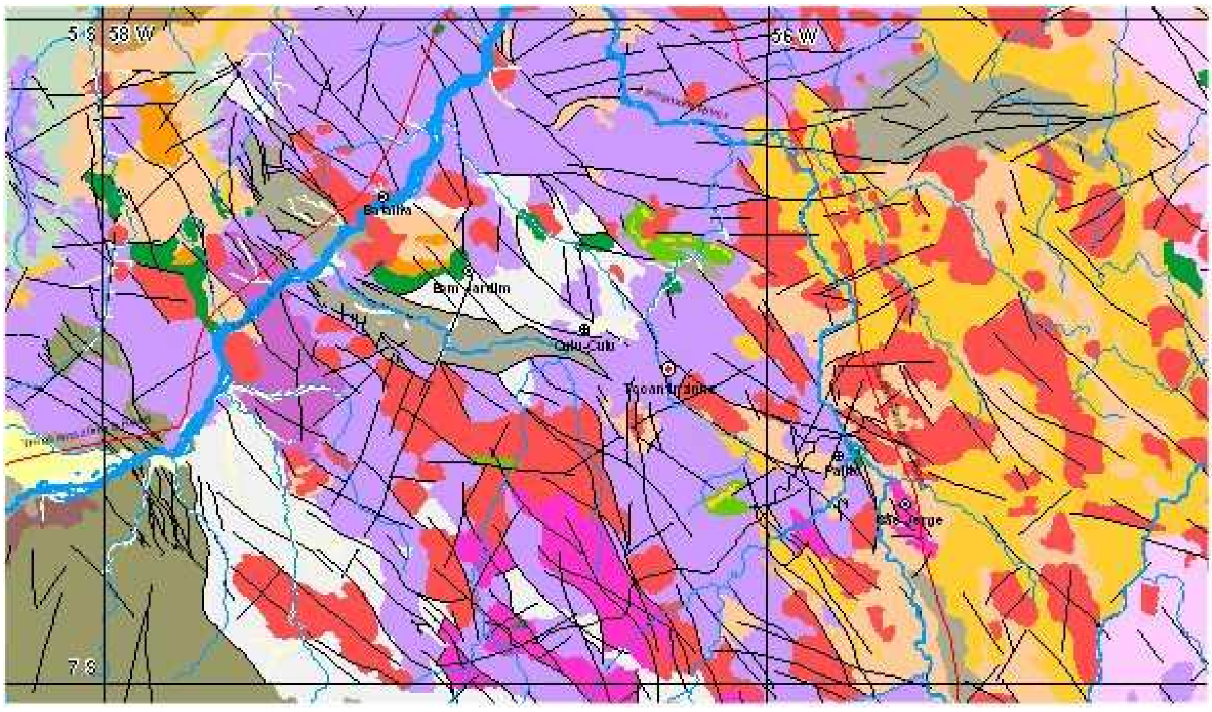


Figure 5 - Regional Geologic Map

7.2 LOCAL GEOLOGY

Whereas the igneous intrusions shown on a small scale geological map of the Tapajós district (Luns Faraco et al., 1996) appear to be scattered at random, it has been proposed that most of the intrusions associated with significant gold garimpos – including the Tocantinzinho Project – line up along the Tocantinzinho Megashear, a north-northwest-trending lineament, readily visible on remote sensing imagery and also known as the Chico Torres Megashear zone or the Cuiú-Cuiú /Tocantinzinho trend (Brandt, Meio Ambiente, October 2005).

The Tocantinzinho area is underlain by an intrusive igneous complex of broad extent. No older country rocks have been recorded in the vicinity. The absence of penetrative foliation or cleavage in the intrusive rocks, coupled with information from other intrusive complexes of the district, indicates that the Tocantinzinho intrusive complex has not suffered significant tectonic disturbance since emplacement.

Gold mineralization at Tocantinzinho appears to be rather closely confined to a distinctive coarse-grained pink granitic rock, which also is the oldest of the intrusive rock types identified on the property. Schuler (1998, p.13), invoking earlier work by David Pascoe of Goldfields, infers that this granite has areal dimensions of 5.0 km by 10 km.

The coarse-grained granite-hosting mineralization has a composition lying "within the syenogranite and monzogranite fields of Streckeisen" (Geller, 2004, p.5.). Color ranges from pink to red, and is due to microcline, the dominant mineral. The feldspars are generally fresh, except for minor sericitization of the plagioclase. The microcline locally displays internal reflections from cleavages and twin planes. The primary mafic mineral or minerals (most likely biotite) has/have been completely transformed to black chlorite. Quartz grains in this rock commonly are large, with a distinctive amoeba-shaped appearance. This feature is called "blebby" quartz. Geller (op. cit.) describes the thin section appearance of a typical occurrence (Sample #8) as follows: "Quartz very coarse, anhedral, extremely undulated, especially in coarse sutured aggregates of healed polygons (=quartz blebs.)" Observations of core show that in some places the blebs projecting into or growing across quartz-chlorite veinlets, indicating that the original or parent quartz grain experienced overgrowth after formation of the veinlet. However, in the majority of cases the reverse is true, quartz-chlorite veins cut across the blebby quartz. The preferred explanation of the blebby character is that it represents a contact metasomatic or hydrothermal effect induced by younger granitic phases which intruded the host granite.

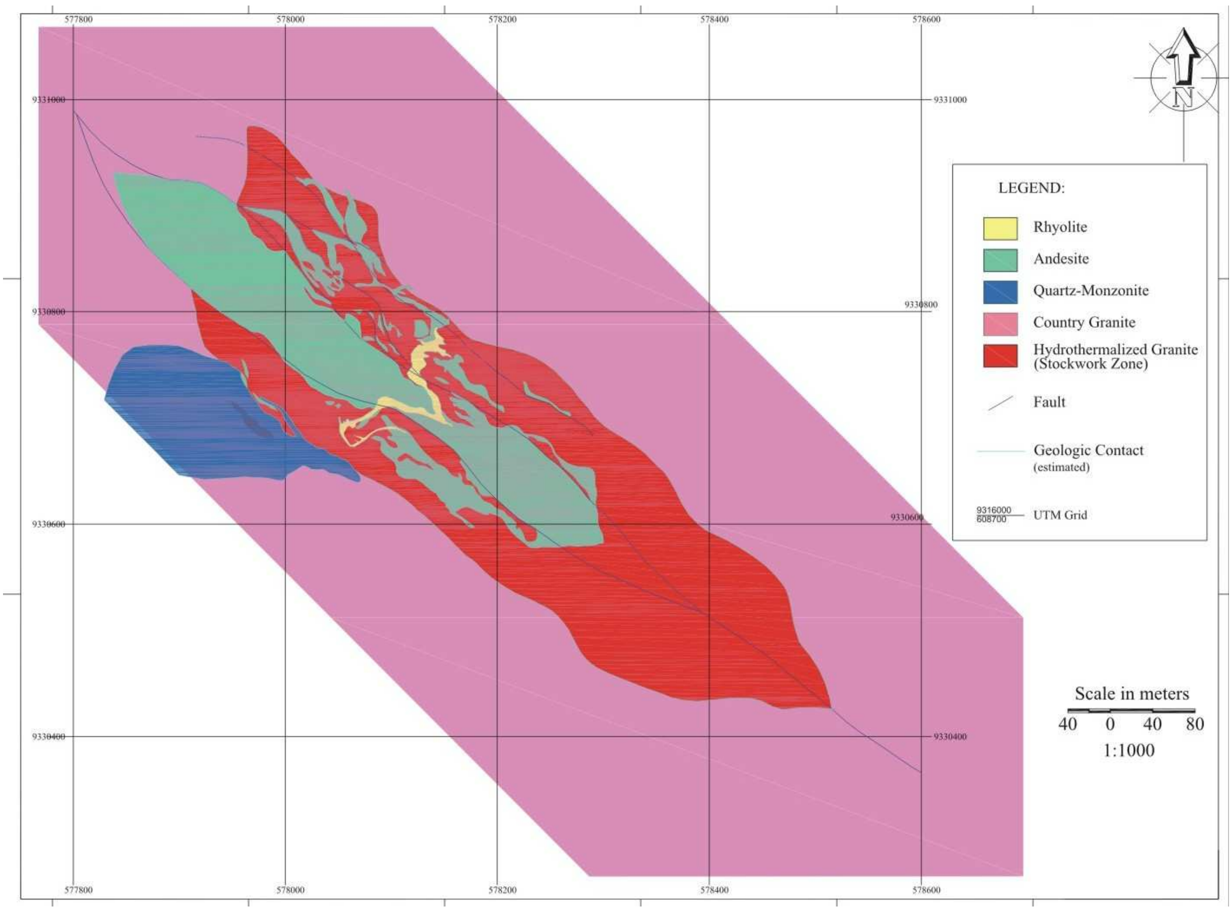


Figure 6 - Local Geology Map.

The granite displays no sign of penetrative foliation except for rare instances where strings of blebby quartz grains demonstrate a weak parallelism. Much of the granite body shows intense crushing and brecciation. Effects of the crushing range from tiny cracks throughout the quartz and feldspar grains to a network of fractures defining an in situ breccia to more advanced brecciation with some rotation of fragments, eventually culminating in breccia with development of matrix (e.g., six of the samples submitted to Bruce Geller – Geller, 2004, p.1.) The crushing and brecciation, though widespread, are not ubiquitous; in DDH #16, for example, core lengths of tens of meters display no visible brecciation. In the absence of extensive outcrops, it is impossible to determine whether the distribution of brecciation in the granite is subject to some systematic pattern.

The origin of the crushing/brecciation is thought possibly to be related to an igneous process (explosive, pneumatolitic or hydraulic) rather than to tectonism. Whatever the origin of the brecciation, the crushed rock was eventually healed, and became compact again, able to support brittle fracturing. The healing has been sufficiently thorough that the breccia interstices are sealed and are not a preferred site for later mineralization.

Closely associated with the granite and presumably co-magmatic with it, are dike-like bodies of aplite and pegmatite up to 4 meters in width. It is not yet clear whether they have a preferred orientation. The aplite and pegmatite appear to grade into each other. Each shows similar development of graphic intergrowth. Quartz grains in aplite and pegmatite have been subjected to the same enlargement or overgrowth phenomenon which produced the blebby character of quartz in the Tocantinzinho Granite.

Surface mapping and several recent drill holes collared near the topographic ridge above the trend of mineralization have better defined the main mass of andesite. This unit forms a tooth-shaped body capping mineralization, narrowing with depth into feeder dikes. The rock is strongly altered, with intense carbonate, chlorite, and sericite development, and is riddled with carbonate veins and veinlets. These veinlets also contain quartz, though generally much less quartz than the veinlets hosted by the granitic rocks below. Gold values within the andesite are generally below the detection limit. However, there are scattered ore-grade gold values within this rock type. A close examination of +1 ppm Au value intercepts in the andesite clearly demonstrated that these elevated gold values are not related to mineralized granitic inclusions but are due to cross-cutting gold-bearing carbonate-quartz veins. In one case, gold was observed in a quartz veinlet that contained some galena, besides the usual pyrite. The tiny gold flakes within quartz have the same size and distribution characteristics as the gold has in the granite-hosted quartz veins. In examining a number of inclusions of veined granitic rocks within the andesite, veining generally can be followed from the andesite into the inclusions. Veins were not observed to be cut-off, but veins do change from dominantly carbonate within the andesite to dominantly quartz within the granitic inclusions.

The andesite forms an upward flaring cap over the main mineralized zone and may have been much more extensive at one time. It is now an erosion remnant along the main ridge, high ground that the placer miners left in place. At the surface the andesite mass varies from widths of 45 meters to over 80 meters and has a vertical dimension that may average 50 meters. It appears to reach its maximum size at about Section 11 and it seems to be continuous from as far north as Section 14 to at least Section 4 to the southeast. Because the andesite overall contains an inconsequential amount of gold mineralization, this large capping mass will have to be mined as waste.

A felsic dike rock unit, exposed in the central portion of the andesite ridge is a true rhyolite. Its outcrop pattern and exposed contacts show it to clearly cut across the andesite, making it the youngest intrusive rock found to date. Flow-banded chill margins confirm the rock to be cooled against all rock types, including the andesite. It is megascopically a cream to light green colored felsite with the rare 2-3 mm quartz and K-feldspar phenocrystals set in the aphanitic groundmass. In thin section the groundmass consists of intensely sericitized K-feldspar and quartz. The rock is laced by hairline to one-centimeter-wide quartz veins and the occasional calcite vein. Some of the veinlets of quartz pinch down and disappear into the groundmass as if these were incipient veins, originating from the rhyolite. Dikes of rhyolite are steeply dipping and contain proliferations of sheeted quartz veins. Quartz veining is also common in the host rocks immediately outside of the dike. Although typically containing less than 5-ppb Au, where veining is intense, values of 100-200 ppb Au are common. Some of the best gold mineralization observed to date occurs within a rhyolite dike near its brecciated margin in hole TOC 05-32. Rhyolite dikes are generally 1-5 meters wide. Figure 6 is a map showing the deposit geology.

The intense sericitization, the presence of incipient veining, disseminated cubes of pyrite set in the granular groundmass, and the striking coincidence of quartz veining in and around this rock unit strongly point to it being a source of siliceous hydrothermal solutions. Where native gold has been observed in veins in the rhyolite, it has the same characteristics as gold-bearing veins in the granitic host rocks: the gold is disseminated in quartz veins as very fine small particles of high fineness.

Only dikes of the square quartz rhyolite are known to date; its source area remains to be investigated. There is the strong possibility that Tocantinzinho's gold-bearing sheeted stockwork formed above the source rock of these dikes. Vein stockworks, even sheeted stockworks, tend to be a carapace above vapor-producing bulged porphyry bodies. The dikes are distinctly a source of quartz veins; the parent intrusive may be the ultimate source of gold-bearing veins. This source intrusive apex remains a potentially lucrative target.

Both the rhyolite and the andesitic rock have aphanitic groundmasses, showing that they crystallized quickly, implying that the host granitic rocks were relatively cool. The various odd petrographic textures within the granitic host rocks, such as early brecciation, biotite introduction, barren quartz-chlorite veining, quartz overgrowths, and rehealing of granular quartz phenocrystal masses may be an early phenomenon and have nothing to do with gold mineralization. The host granitic mass is a complex of various intrusive units, each one of which may have been responsible for fracturing, brecciating, and veining of previously emplaced masses. The relevant veining and alteration are those that have associated sulfides. Though there may be several phases of sulfide and gold-bearing veining, the granitic rocks appear to have had nothing to do with the emplacement of mineralization. Other potentially ore-related porphyries have been discovered during Phase II drilling. A porphyry was intersected in the lower part of TOC 05-24 that has an unusual bimodal size distribution of phenocrysts. Sericitized microcline and plagioclase form two populations of phenocrysts in a microscopic groundmass of quartz, K-feldspar, and plagioclase. Phenocrysts form about 40 percent of the rock. Books of completely chloritized biotite are also a common constituent of this porphyry and disseminated cubes of pyrite are common. Very few quartz phenocrysts occur in this rock that may be best labeled a quartz latite.

Porphyries tend to be intruded in dilation zones within shear couples or in pressure shadows at the intersection of major shear zones. The structural features of this shear system set the stage for the orientation of the sheeted stockworks. But in the mesozonal setting of the stockworks, there is almost always a clear relationship between veining and source porphyry.

The quartz-chlorite veins are early in the paragenetic sequence and may be related to the introduction of one of the post-coarse-grained granite intrusive phases of the older batholitic sequence of intrusions. Yet the presence of quartz-chlorite veins is a good indicator of low-grade gold values. Chlorite, especially chlorite veining without much quartz, is well developed near the intensely chloritized andesite dikes, as if that type of chlorite veining is related to the andesitic intrusives.

8. DEPOSIT TYPES

The Amazon Craton extends from Venezuela and Guyana to the Tapajós region and hosts a great variety of mineral deposit types, including some of the larger gold deposits of South America, such as:

- Omai in Guyana (Open pit production since 1993, 3.7 million ounces Au: the Fennell pit produced 49 million tonnes at 1.50 g/t Au - Cambior, August 2006),
- Las Brisas in Venezuela (582 million tonnes @ 0.66 g/t Au, 0.126% Cu),
- Las Cristinas in Venezuela (244 million tonnes of 1.33 g/t Au),
- Serra Pelada in Brazil (3.7 million tonnes of 15.3 g/t Au in addition to approximately 1.3-1.9 million ounces of gold historically produced by artesian miners),
- Gross Rosebel in Guyana (42 million tonnes of 1.6 g/t Au).
- Salobo in Brazil (789 million tonnes of 0.52 g/t Au and 0.96% Cu).

Exploration in the Amazon Craton over the last twenty years has drastically changed the importance of certain deposit types. The discovery of the giant iron oxide copper gold (IOCG) type deposits in the Carajás district of eastern Pará State make this type of mineralization the most lucrative for the exploration community.

Primary gold occurrences in the Amazon Craton of Venezuela, Guyana, and Brazil, have been historically contained in four main categories: veins in greenstones or metasediments, placers near a granite-greenstone contact, local placers over greenstone bodies, and veins in granitic or gneissic rocks.

Historically, gold production in the Tapajós Region has been restricted to alluvial material and secondary enriched laterite and saprolite material immediately below the surface. Near-surface gold enrichment can be attributed to the tropical climate, low topographic relief, and an absence of a thick post-Proterozoic cover, which create ideal conditions for the remobilization of lode gold in the weathering zone. The laterite and saprolite are commonly exploited by the garimpeiros. Due to secondary enrichment and oxidation, these deposits may be concentrated over uneconomic bedrock mineralization, forming superficial gold occurrences. The gold generally consists of small grains and nuggets occurring in deeply weathered areas within laterite soil and saprolite in vertical thickness from 10 meters up to 50 meters. A large percentage of the gold is residual in origin and likely represents particles weathered from auriferous quartz veins. Some of the gold may be of chemical origin with, gold precipitated from solutions that derived the metal both from weathering of the gold-quartz veins and from the host rocks. Gold mineralization appears to be primarily controlled by major northwest-trending structures, but host rock control appears to be an important factor.

Garimpeiro activities in the Tapajós region have uncovered numerous zones of primary mineralization. It is important to note that the areas with a high density of primary mineralization are generally coincident with areas of high density of auriferous alluvium deposits and intense garimpeiro developments.

The main types of primary gold mineralization described within the Tapajós region are the following:

- Stockworks and disseminated;
- Quartz vein deposits;
- Quartz-sulfide lodes;
- Shear hosted

The sources of the myriad of placers in the Tapajós region are generally low to moderate sulphide-containing gold-quartz veins. Gold mineralization contained within the Brazillian Shield is commonly localized by faults and shear zones. Quartz veins generally range in thickness from a fraction of a centimeter to upwards of ten meters.

The quartz veins are typically milky white to grey in color and not banded. Native gold and minor to trace amounts of pyrite with lesser amounts of chalcopyrite, bornite, galena, and sphalerite are the most typical accessory minerals in the quartz veins. Carbonate alteration in the quartz veins extends as much as 30 meters into the wallrocks in some districts. In addition to carbonate alteration, the wallrocks can be intensely silicified, sericitized, and propylitized (with epidote and chlorite) as much as several tens of meters away from the veins.

9. MINERALIZATION

The Tocantinzinho mineral deposit is a bulk-tonnage gold-bearing sheeted quartz vein stockwork hosted in granitic rocks of the Parauari intrusive complex. A consistent large mass of stockwork gold mineralization has been outlined by core drilling with dimensions of about 700 meters in a northwesterly direction and a width dimension of about 120-180 meters in a northeasterly direction.

Gold is associated with hairline to 4-cm wide stockwork quartz veinlets with several predominant veinlet trends. The two strongest veinlet trends strike at about N20-30oE and N70-80oE respectively. Other veinlet trends also exist, but because of the predominance of the two trends, the veining is best described as a sheeted stockwork.

Two types of veins and veinlets are predominant in the stockwork zone. An earlier quartz-chlorite vein system forms sheeted stockworks and has associated pyrite. Associated to these quartz-chlorite veins economic gold mineralization is ubiquitous. The second and younger vein type (base metal veins) is a gray quartz with pyrite, generally with chlorite and carbonate variable small quantities of chalcopyrite, galena, sphalerite and native gold. Where the sulfide minerals are coarse-grained and abundant in these veins, native gold is generally visible to the naked eye as 1-mm or smaller individual specks and flakes. Microscopic studies have shown that gold is also disseminated as discrete 1 -5 micron particles in pyrite. The two styles of veining are coincidental but the base metal veins tend to follow quartz-chlorite veining.

The presence of abundant grayish quartz veinlets, especially when galena or chalcopyrite are also visible in the drill core signals that gold values are high. Disseminated pyrite in the core with abundant quartz-chlorite veinlets indicates lower grade gold values but still resource-grade mineralization. Stockwork-type veining is consistent and drill holes have intersected this style of mineralization in excess of 300 meters in length. Though open at depth, the stockwork stops rather abruptly on the flanks of the stockwork zone. The overall sulfide content of the gold-bearing stockwork zone varies from 1-3 volume percent and may average between 1 and 2 percent. This amount of sulfide, for all practical purposes pyrite, coincides with the average gold grade of the stockwork of 1.5-2.0 g/t Au.

The deposit has been followed by drilling from the surface to a vertical depth of 300 meters and has not been bottomed. Gold mineralization is preferentially hosted in coarse-grained granite. The granite has aplite and pegmatite phases that were less amenable to veining and gold mineralization. Characteristic of the zone of mineralization within the granite host is the ubiquitous presence of sheeted planar quartz-chlorite veinlets. These veinlets are typically 1-4 mm in width. Sparse pyrite is a common constituent of these veinlets. Outside the veins, pyrite generally replaces chlorite and tends to be cubic in habit, usually 1-mm or smaller in the size of the crystals. Chlorite also occurs as distinct wisps and as fracture coatings within the granite host, generally associated to the pyrite. Chlorite veining and chlorite wisps within the host granite are exceptionally common and well-developed near chlorite-rich altered andesite dikes, suggesting that at least some of the components of the chlorite are derived from the andesite.

The overall pyrite content of the stockwork-bearing granite averages 1-2 percent of the rock by volume, based on the geological core logs. Two zones of mineralization in drill hole TOC 06-35 were analyzed for total sulfur, copper, and lead. The first set of analyses of 37 individual samples, representing 71.19 m of core, with an average grade of 1.25 g/t Au has a weighted average of 0.26 percent total sulfur. The second segment of drill core, representing 75.85 m of mineralized core, with an average grade of 1.88 g/t

Au, composed of 40 individual samples, has a weighted average of 0.31 percent total sulfur. If all of the sulfur is ascribed to pyrite, and sulfur theoretically makes up 53.4 percent of pyrite by weight, then the average pyrite content of these two mineralized intervals is about 0.42 percent by weight. Copper and lead contents of the individual samples are consistently below the wet chemical lower analytical limit of 0.01 percent for each element.

A distinguishing characteristic feature of the host granite is that its quartz phenocrystals have a blebby botryoidal-like habit: a white to faint-blue granular texture that suggests recrystallization and overgrowth. In several areas of the mineralization blebby quartz phenocrysts have been observed to have grown across quartz-chlorite veinlets; however, that is the exception to the rule as quartz-chlorite veinlets generally cut across the blebby quartz phenocrysts. Coincident with the blebby quartz, the K-feldspars (microcline) have a distinct salmon-pink color due to microscopic inclusions of hematite. The combination of this bright pink color of the feldspar with the blebby white quartz, constituting the most productive host rocks, has been given the alteration type field name of “Salami-Type” granite.

A second most important veining style is the “gray quartz” veining. This type of veining is younger than the quartz-chlorite veining, generally of the same thickness and structural attitude as the earlier quartz-chlorite veins but locally ballooning up to 4 cm in thickness. The gray quartz veins are distinguished by their finely to coarsely disseminated pyrite, thus their gray color, whose shape tends to be irregular and not individual cubes, generally forming irregular aggregates within the veins. Differing from the earlier quartz-chlorite veins, the gray quartz veins characteristically contain various amounts of chalcopyrite, galena, traces of sphalerite, and native gold. Veins show no banding. There are no significant concentrations of deleterious elements such as arsenic. Gold tends to be visible to the naked eye when there is an abundance of galena and chalcopyrite. The veins also can contain calcite in their centers. Gray quartz veins are less planar than the quartz-chlorite veins and are anastomizing and branching. A careful examination of drill core intervals which contain more than 5 g/t Au usually reveals the presence of visible gold in gray quartz veins or veinlets. There is the distinct possibility that gold values in core below grades of 5 g/t Au can also be attributed to more subtle and thinner veinlets of gray quartz which are intergrown with the earlier quartz-chlorite veinlets. Observations support this but it has not yet been conclusively demonstrated. The frequency and thickness of gray quartz veining is in direct proportion to the gold grade of the various intervals. The abundance of early quartz-chlorite sheeted stockwork veining might be an indicator of a structurally active environment, an environment favorable to the introduction of later gold-bearing gray quartz veins and veinlets. Nevertheless, early quartz-chlorite veining is an indicator for gold mineralization above the 0.2 g/t cutoff grade.

The quartz-sheeted veins, the blebby quartz phenocrysts and silica flooding, which do occur mainly in the gray type ore, indicate that silicification is an important alteration phase to the mineralization. Because chlorite, silica and the small amounts of pyrite are the most distinguishing characteristics of alteration, the general alteration scheme is best described as propylitic.

The sheeted stockwork veinlets show some preferred orientation. Though many vein orientations have been measured, two directions are predominant: one averaging about N25E and a second averaging about N75E. In surface outcrops these orientations prevail, forming sub-parallel sheeted stockworks. Virtually all of the sheeted veinlets mapped at the surface have near-vertical dips. The vertical continuity of the stockwork system, in the dip direction of the veinlets, has been demonstrated by drilling.

A mass of andesite, a subvolcanic intrusive unit occurs above the stockwork mineralization and may have had some control on the distribution of gold-bearing quartz veining below it. The andesite appears to be an erosion remnant of a more extensive andesitic subvolcanic dike swarm, possibly the feeder zone of an andesitic volcanic field. The andesite forms a tooth-shaped body, flaring upwards and capping mineralization, narrowing at shallow depths into feeder dikes. It predates gold mineralization but is a poor host to quartz veining and seems to have acted as a barrier to upward-moving gold-bearing fluids which formed the stockwork immediately below it. The andesite is strongly altered to chlorite, carbonate, and sericite. The andesite, like the granite, is intruded by rhyolite porphyry dikes, the youngest intrusive rock type found to date. Microscopically these dikes have a granular sericitized groundmass with widely spaced phenocrysts of square quartz and feldspar. The rhyolite contains sparsely disseminated pyrite and many hairlines to microscopic veinlets of quartz and locally calcite. At the contacts of rhyolite dikes, both within the dikes and the surrounding granitic host rock, there is a distinct build-up of quartz veining, strongly indicating that the rhyolite is the source of the quartz veining and some of the gold mineralization. Most of the garimpeiros' activity at Tocantinzinho at this time is in saprolite of veined rhyolite and the immediately surrounding veined granite. The source region of the rhyolite porphyry dikes has not yet been located. The dikes may represent the upward extending fingers of a source granitic mass at depth. The source intrusive is most likely to be of Maloquinha type and age.

Gold grade distribution is remarkably constant within the mineralized stockwork body. Assay intervals of drill core, generally two meters in length, consistently show gold values close to the average grade. There are some high-grade intervals, but these are the exception. Within the cutoff grade of 0.2 g/t Au, the grade of mineralization, assay interval after assay interval, is consistent with the average grade of about 1.5 g/t Au. Gold mineralization at Tocantinzinho is associated with a near-vertically dipping stockwork of quartz veinlets. This mass of veined granite forms a consistent and continuous body of bulk-tonnage proportions.

10. EXPLORATION

Exploration work completed to date at the Tocantinzinho Project include the establishment of a grid, geological mapping, channel sampling in the garimpeiro pits, geochemical studies, auger soil sampling, power auger drilling, geophysical investigations by ground and airborne magnetic surveying, and core drilling programs that have completed 71 holes for a total drilled depth of 17.237,37 meters. In addition, petrographic and metallurgical studies have been conducted on drill core by contracted consulting firms.

A topographic grid was established and all location control is based on this grid. Grid north is 328° true north. The average of GPS readings at point 5000E, 9000N on the grid base line is equal to UTM coordinate 578308E, 9330652N (Zone 21M, South America 69 Datum).

The area around Tocantinzinho is jungle-covered with a lateritic profile of 2 to 10m overlying another 10 to 20m of saprolite. Weathered outcrops occasionally occur in drainages and it is generally possible to identify the original rock type from these outcrops. Some relatively fresh outcrops occur in the larger drainages. Detailed geological mapping was completed along the barren central ridge and in the main, placer pits. Some of the workings have changed in shape and exposures since the mapping due to continued garimpeiros mining.

A ferruginous zone lies near the base of the soil/laterite profile and commonly contains nodules and layers of ferricrete usually overlying the Fe-rich andesites. The garimpeiros generally do not exploit below the ferricrete horizon.

Soil sampling was conducted around the main garimpeiro workings and along lines and grids extending up to two km from the garimpeiro pits. Within the main grid placed on the obviously mineralized zone, lines were located at 100 meter spacing and samples were taken at 40 meter intervals along the lines. Over 700 samples were collected between 1997 and 1999. Samples were collected using a hand auger and at the start of the program a survey was conducted to determine the optimum depth for sample collection. Samples were collected from several locations at half-meter increments and Schuler reports that grades were slightly enriched in the top half meter but relatively consistent below this level. As a result of this survey, all samples were collected between 0.5 and 1.0 meters depth.

The soil sampling program outlined a highly anomalous area roughly 1000 meters long by up to 500 meters wide. This area has now been almost completely excavated by the garimpeiros. There were some other anomalous values found in the near vicinity of the main anomaly, which at the time warranted further investigation, provided in situ mineralization was found under the pit. The soil samples were not assayed, but panned with the grade calculated from counted gold grains.

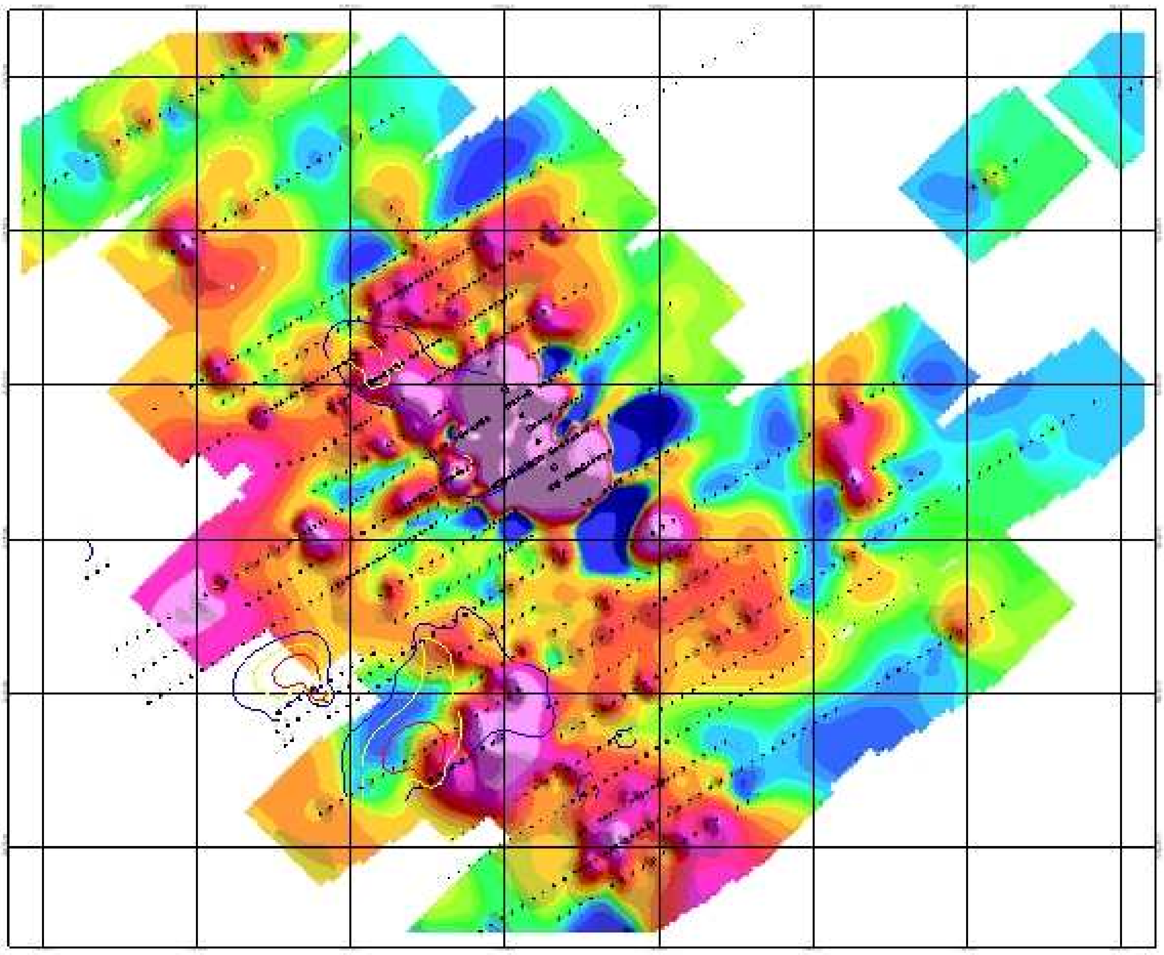


Figure 7 - Soil Geochemistry

Schuler states that this pinta counting technique has been used by many companies in Brazil because labor is inexpensive and turnaround time for results is short. It is particularly effective at Tocantinzinho where costs are high for transporting samples from the project. The soil sampling project employed two panners who had many years of experience in this technique with RTZ. The area underlying the principal anomaly has been almost completely removed by the garimpeiros since that time.

Four-hundred-seventy-six channel samples of saprolite (weathered bedrock) were collected from the various garimpeiro pits. These were mostly 4-m horizontal samples from walls and floors of the garimpeiro pits with a few vertical channels collected from the walls of the pits. There was not a systematic approach to the sample location, with samples taken from available garimpeiro working faces. Bondar Clegg assayed all channel samples; maps are available showing the location of all of the samples. Some of the pits, particularly the north part of the main pit, were sampled several times at different levels as the garimpeiros excavations went deeper. All of the sampled areas are now covered by either sandy tailings or water.

A ground magnetometer survey was conducted along the established grid lines spaced 50 meters apart. The lines completed were from grid 9000 N to 9450 N with the survey extending between 4700 E and 5300 E. Readings were taken at 5 meter intervals. Altoro collected 6.0 km of magnetic data with one magnetometer, using a loop configuration whereby the operator returned to the base station for control. Along the 50m line separation, the station separation was 5m. A total of 10 east-west oriented lines of 600m each were surveyed. The data were processed by Rhiannon Morris, a consulting geophysicist with Howe Chile Limitada. Data were corrected and leveled.

A total of 87 power auger holes were drilled in 1998 for 1,318 meters, an additional 503 meters were drilled in 58 holes in 1999. The power augers were purchased from the manufacturer in Belo Horizonte, these drills were designed specifically for sampling laterite/saprolite to a depth of 30 meters and, in general, functioned well with perforation rates of 15 to 20 meters per day.

The upper part of the hole was drilled with a 3-inch diameter bit. If conditions became sticky or hard, a reduction was made to a 2.5 inch bit. Generally, the holes were drilled to 20 meters, but shallower if hard ground was encountered. Deeper depths were possible in some cases but because production slowed dramatically at depths greater than 15 meters, most holes were not drilled deeper than 20 meters.

Some of the holes in the garimpeiro pits were stopped at shallow depth because of water. In these cases abundant water caused the sample to turn to mud and be lost out the bottom of the auger. It is unlikely that any free gold would be removed from a rotary auger hole in the presence of significant amounts of water.

The first 10 power auger holes were sampled at 1-meter intervals. Subsequent holes were sampled at 2- meter intervals. The samples were transported to a processing f facility near camp where a 2 kg assay sample, along with a 2 kg duplicate, were split by cone and quartering. Bondar Clegg assayed all power auger samples. For the first 35 holes, the remaining material was panned and pintas counted. The panning and counting technique was discontinued by the operators primarily to prevent the garimpeiros from locating anomalous areas of gold. In addition, comparison of the data would make most prudent operators stop the process as the pinta grades were generally underestimating the grade of the sample when compared to the actual assay grade.

Power auger holes were logged by a geologist and primary lithologies interpreted for saprolite. The average saprolite intersection in all of the 145 holes was 9.1 meters with an average grade of 1.00 g/t Au. The advantages of the power auger are that it is easily mobilized to the site and that it is capable of being maintained and operated by local personnel. The limitations of the power auger sampling are that only vertical holes are possible and therefore samples are not obtained across geological features which are predominately vertical at Tocantinzinho. The depth limitation of the drill does not permit the sampling of fresh rock.

Recent airborne geophysical surveys have identified several target areas. In a grand sense, Tocantinzinho is located at the junction of a very prominent northwest-trending magnetic low (probably a large shear zone) where it crosses an east-northeast-trending magnetic low, probably representing another shear zone. In detail, the northwest-trending zone has an intermediate low that seems to correlate with mineralization. This magnetic trough, probably representing an iron oxide-destructive hydrothermally altered area, appears to be offset by an NW-SE magnetic high. The magnetic trough of interest is offset to the east by the magnetic high feature and appears to continue towards the southeast. This is a distinct exploration target. To the northwest of the drilled area, the magnetic low trough meets the prominent ENE-trending magnetic low. This is an unknown area, representing destruction of iron oxides, and is also a legitimate drill target. Both of these magnetically anomalous areas should be tested during the next stage of drilling.

In early 2004, following some geochemical sampling, Jaguar Resources do Brasil Ltda. (Brazauro’s Brazilian subsidiary) initiated an exploratory core drilling program of 20 holes of an average length of 227 meters per hole. The first hole drilled below the

extensive placer workings was a discovery hole, intersecting stockwork gold mineralization over 91.90m @ 1.01g/t Au.
In addition, Brazauro has three more exploration areas in the region, Crepori and Bom Jardim, northwest of Tocantinzinho, and to the south, Sucuri.
The Crepori prospect is located near the mouth of the Crepori River with the Tapajós River at a distance of 220 km SW from the town of Itaituba. Access can also be achieved by boat trough the Tapajós and Crepori rivers.
The prospect lies inside the granites of the Au-fertile Parauari Intrusive Suite (1883 Ma) near the contact with the volcanoclastic rocks of the Buiuçu Formation (1890 Ma) to the southwest.
Like many other prospects in the Tapajós, the Crepori primary mineralization was exposed by garimpeiros' workings on the alluvial and colluvial materials. The exposed mineralization comprises a quartz-sulfide lode with high grades of gold and also, possibly Au-rich wall rock alteration zones related to the high grade lodes. The lode is composed by quartz + galena + chalcopyrite ± sphalerite. Fourteen (14) rock chip samples systematic collected on the main lode have returned gold assays in the range between 5.00g/t and 42.00g/t with an average of 13.00g/t Au. As the pits have limited dimension and/or are flooded, no long channels could be sampled yet. Nevertheless, at least three channels in the saprolitic granite, with mm quartz veining and hydrothermal alteration have returned gold intercepts like 2.00m a 4.27g/t; 4.00m a 5.56g/t and 9.00m a 4.09g/t, what is encouraging in terms of mineralization occurring in the wall rock material too.
Currently, at Crepori prospect, a camp was built to support soil gridding and sampling along with geological mapping. The soil geochemistry survey and geologic mapping are underway in order to support drilling before the start of the rainy season in December/07.
The Bom Jardim/Circulo area locates approximately 30km NE of the Crepori mouth at theTapajós river. The Bom Jardim/Circulo is a spectacular circular feature resembling a large volcanic caldera. The geology of the area is composed by intermediate-acid volcanic rocks of the Uatumã tectono-magmatic event (1,900-1,882 Ma). The volcanic rocks are dacites and latites of the Bom Jardim Formation and dacites and rhyolites of the Salustiano Formation.
In this area, Brazauro aims to explore for gold deposits related to epithermal systems like those existent in the Fanerozoic mountain belts. This idea is supported by the discovery made by Rio Tinto Exploration Brasil in 1998, of the oldest Au-epithermal system (V3-Botica) preserved in the world. Like Bom Jardim, the mineralized volcanic rocks at V3-Botica are also of the Uatumã event, in that case, in the Salustiano Formation.
Brazauro has recently been issued four exploration licenses by the DNPM, for a total of 37,652.8 hectares at Bom Jardim/Circulo.
The Sucuri Project locates in the southern portion of the Tapajós District, north to the Cachimbo rift and close to the border with Mato Grosso state. Country rocks are granites and granodiorites of the Creporizão Intrusive Suite (1,997 Ma). Primary mineralization was recently exposed by garimpeiros' workings on colluvial material. Gold is hosted in highly silicified lodes where pyrite and chalcopyrite are the sulfide phases more important. The lodes are hosted in an E-W trending shear zone, dipping steeply to the South.
Main lode (Alvino) extends approximately 200 meters with an average width ranging from 0.50 to 2.50 meters. Mineralization extends to the host hydrothermalized granodiorite. Best intercepts in channel samples collected in the Main Lode include:

2.50m a 11.04g/t, 3.00m a 43.35g/t, 0.50m a 172.19g/t and 0.50m a 311.51 g/t exclusively in the lode and 3.80m a 8.14g/t and 5.25m a 6.90g/t in the lode plus wall rock. Eleven (11) chip samples, systematically collected over the main lode, returned an average grade of 35.38g/t Au.

The anomalous geochemistry trend runs E-W for at least nine hundred (900) meters and it includes three zones of lodes occurrences, Parazinho to the west, Parazão to northwest and Alvino to the east.

Fourteen drill holes (1,835 meters) have been completed at Sucuri in the last quarter of 2006. The mineralization style (high grade lodes) was confirmed; a significant hydrothermal halo was also identified. This halo is in cross section, 50 to 80 meters wide and is zoned, with predominant sericite/epidote in the center and hematite at the margins. The sericite/epidote zone hosts disseminated pyrite ± chalcopyrite ± sphalerite. Gold distribution in the sericite/epidote zone seems to be erratic and marginal in grades. Best drilling intercepts are restrict to the main lode and include 1.55m a 22.74g/t Au (DH-03), 1.00m a 11.38g/t Au (DH-04) and 1.65m a 13.54g/t Au (DH-11).

11. DRILLING

To the end of June, 2007, Brazauro has completed three core drilling phases that include 71 holes at Tocantinzinho for a total of 17.237,37 meters. Of the 71 holes, 59 have explored the main trend of mineralization and the twelve remaining holes were intended as prospecting holes to test some of the surrounding areas to the main known zone of the deposit.

11.1 CORE DRILLING PROGRAMS

All drilling by Brazauro has been core drilling and was conducted by Kluane International Drilling, Inc. whose base is in Vancouver, B.C., Canada. Kluane uses a light weight portable Hydrocore Gopher all-hydraulic drill rig capable of drilling +350 meters of BTW core. Drill holes were drilled NTW size, with a drill core diameter of 5.71 centimeters, from the surface through the laterite and across the saprolitic bedrock. When hard unoxidized bedrock was reached, generally at depths between 25 and 40 meters, the gauge of drill rods was reduced to BTW size. The bulk of the drill core is BTW size with a drill core diameter of 4.20 centimeters. All drill holes were angle holes drilled at 50 to 75 degree angles from the horizontal, generally at right angles to the long-axis trend of mineralization, drilled either towards the northeast or towards the southwest. Three of the holes were drilled parallel with the trend of the mineralization, with the purpose of crosscutting the two major sheeted vein trends at the optimal intermediate angle.

The core was split on site by means of a diamond bladed rock saw. One-half of the drill core was sent for assay while the second half has been kept on site for geological studies. Of the 71 core holes completed to date twelve had been programmed for prospecting exploration in surrounding adjacent areas to the main Tocantinzinho mineralization. The rest of the holes have all been within the 800-m-long continuous geochemical anomaly along the main Tocantinzinho trend. A summary of all drilling is shown on Table 4.

	Header			Collar		Drillhole
HoleID	East	North	Elevation	Azimuth	Dip	Final_Depth
TOC-04-01	578.009	9.330.619	129,89	28	-55	225,60
TOC-04-02	578.064	9.330.633	128,56	308	-60	220,40
TOC-04-03	578.151	9.330.660	130,97	208	-55	201,20
TOC-04-04	578.290	9.330.679	123,81	218	-55	201,25
TOC-04-05	578.169	9.330.764	136,16	208	-55	222,56
TOC-04-06	578.096	9.330.845	134,76	238	-55	214,42
TOC-04-07	578.037	9.330.927	131,47	248	-55	201,34
TOC-04-08	577.873	9.330.927	124,97	73	-55	240,54
TOC-04-09	578.176	9.330.650	130,09	38	-60	233,23
TOC-04-10	578.065	9.330.669	129,29	28	-60	253,05
TOC-04-11	578.378	9.330.676	123,31	218	-55	300,00
TOC-04-12	578.024	9.330.962	131,77	248	-55	262,20
TOC-04-13	577.930	9.331.009	126,46	248	-55	165,20
TOC-04-14	577.610	9.331.056	129,64	218	-51	180,00
TOC-04-15	578.076	9.330.829	129,37	208	-55	240,20
TOC-04-16	578.429	9.330.627	122,16	218	-55	295,12
TOC-04-17	578.154	9.330.708	133,62	118	-55	355,18
TOC-04-18	577.983	9.330.838	148,01	58	-60	243,90
TOC-04-19	578.033	9.330.827	136,32	118	-55	286,60
TOC-04-20	577.666	9.330.022	117,33	218	-60	150,90
TOC-05-21	578.165	9.330.527	125,42	38	-55	315,55
TOC-05-22	578.247	9.330.513	127,92	38	-55	280,42
TOC-05-23	578.323	9.330.721	122,79	218	-55	150,27
TOC-05-24	578.327	9.330.391	125,74	38	-51	350,52
TOC-05-25	578.270	9.330.643	124,44	218	-51	213,05
TOC-05-26	578.113	9.330.794	135,79	28	-51	150,29
TOC-05-27	578.515	9.330.517	131,02	218	-51	318,52
TOC-05-28	577.983	9.330.838	148,01	208	-51	181,96
TOC-05-29	577.922	9.330.907	132,54	208	-51	300,25
TOC-05-30	578.282	9.330.450	123,74	38	-55	331,30
TOC-05-31	578.275	9.330.773	126,14	218	-51	222,50
TOC-05-32	577.968	9.330.717	127,49	28	-51	320,95
TOC-05-33	578.575	9.330.482	135,36	218	-51	317,00
TOC-05-34	578.295	9.330.564	129,29	120	-53	306,30
TOC-06-35	578.129	9.330.536	130,63	38	-50	336,80
TOC-06-36	578.070	9.330.577	129,79	28	-50	376,43
TOC-06-37	578.119	9.330.679	132,31	28	-75	150,87
TOC-06-38	577.944	9.330.673	145,84	28	-70	336,80
TOC-06-39	578.119	9.330.679	132,31	28	-50	234,69
TOC-06-40	578.012	9.330.801	159,15	28	-50	230,21
TOC-06-41	577.205	9.331.590	124,00	238	-70	243,40
TOC-06-42	578.063	9.330.924	135,00	238	-50	230,10
TOC-06-43	578.355	9.330.651	133,93	218	-50	249,90
TOC-06-44	578.289	9.330.565	131,00	38	-50	182,88
TOC-06-45	578.404	9.330.600	132,00	218	-50	204,21
TOC-06-46	577.779	9.329.706	133,00	62	-50	246,07
TOC-07-47	578.436	9.330.583	133,45	218	-75	341,37
TOC-07-48	578.391	9.330.635	127,45	218	-65	328,57
TOC-07-49	577.735	9.329.988	153,00	218	-50	204,21
TOC-07-50	577.550	9.330.010	159,00	38	-50	192,02
TOC-07-51	577.443	9.330.051	143,00	238	-50	185,92
TOC-07-52	578.563	9.330.466	137,46	218	-72	350,52
TOC-07-53	578.234	9.330.021	167,00	90	-60	193,85
TOC-07-54	578.577	9.327.422	141,00	180	-50	150,87
TOC-07-55	578.590	9.327.452	121,00	180	-50	158,49
TOC-07-56	578.309	9.330.415	132,45	38	-55	321,56
TOC-07-57	578.355	9.330.476	131,00	38	-55	230,12
TOC-07-58	578.503	9.330.265	145,45	38	-70	249,95
TOC-07-59	578.634	9.330.424	131,33	38	-55	186,38
TOC-07-60	578.337	9.330.677	134,00	218	-65	310,90
TOC-07-61	578.210	9.330.773	152,00	208	-55	281,94
TOC-07-62	578.119	9.330.831	142,00	208	-60	362,71
TOC-07-63	578.535	9.330.305	162,00	38	-55	283,46
TOC-07-64	578.618	9.327.510	140,00	180	-50	198,12
TOC-07-65	578.671	9.327.523	129,00	180	-50	120,39
TOC-07-66	577.900	9.331.035	134,00	208	-50	237,74
TOC-07-67	577.834	9.330.910	169,00	208	-50	150,87
TOC-07-68	577.775	9.330.959	132,00	28	-50	198,12
TOC-07-69	577.732	9.330.857	149,21	28	-50	188,97
TOC-07-70	577.682	9.330.911	145,00	28	-50	165,5
TOC-07-71	577.735	9.329.988	153,00	308	-50	170,69

Table 4 - Drilling Summary.

In 2004, the company completed its first exploratory core drilling program of 20 holes for a total of 4,692.9 meters. The first hole, TOC 04-01 intersected significant gold mineralization and was the discovery hole.

During the second drilling campaign, conducted in 2005, holes TOC 05-21 through TOC 05-34 were completed for a total of 3,758.4 meters. The third drilling campaign was conducted in mid-2006 when core holes TOC 06-35 through TOC 06-46 were completed. These 12 holes amounted to a total of 3,022.4 meters. The fourth and last campaign concluded in mid 2007, when core holes TOC 06-47 through TOC 07-71 were completed. These 24 holes amounted to a total of 5.763,24 meters. The figure below shows the drill hole distribution, in relation to the orebody.

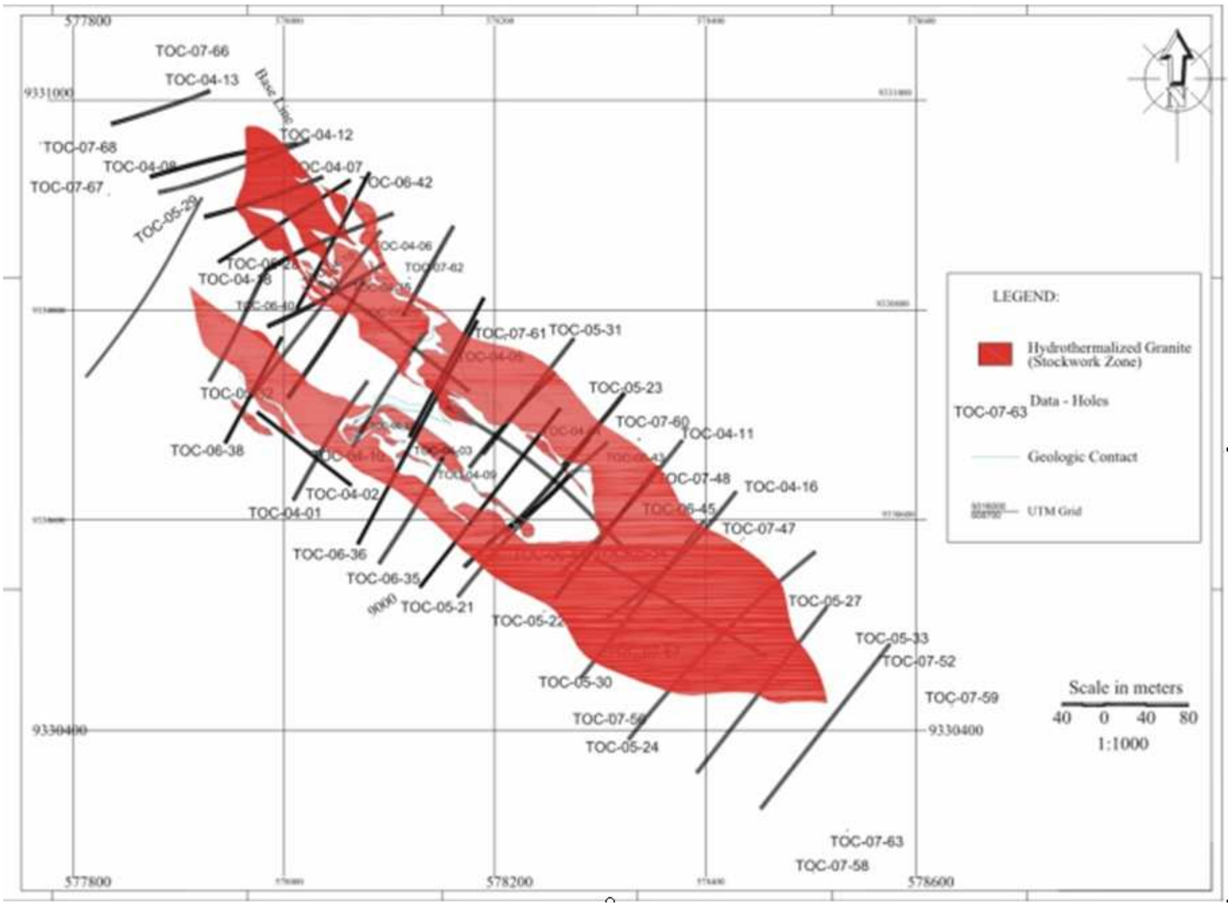


Figure 8 - Drill Hole Location Map

12. SAMPLING METHODS AND APPROACHES

NCL was able to discuss the protocols and procedures with Brazauro personnel. Descriptions of the past sampling methodology appear in the Star Resources Corp. Technical Report of July 10, 2003, prepared by Orequest.
Previous to core drilling, three types of samples were used to evaluate and define gold anomalous areas. Initially hand augers were used to obtain soil samples on a grid pattern collected from depths between one-half and one meter. Later, power-auger drills were used to sample laterite and saprolite to depths of up to 20 meters. Channel samples were taken from existing garimpeiro pits. Altoro Gold collected all of the samples referred to in this section of the report during exploration programs in 1997-1999. All samples that were sent for analysis during these programs were reportedly prepared at the Companhia de Pesquisa de Recursos Minerais (CPRM) preparation facility in Itaituba. Two-hundred gram pulps were prepared, and sent to Bondar Clegg in Luiziânia, Goias State. The samples were then shipped to the Bondar Clegg lab in Vancouver, Canada where they were analyzed by Bondar Clegg's Au 50 fire assay AA finish technique for gold analysis. The CPRM facility is no longer operating in Itaituba and it was therefore not possible to inspect it. Bondar Clegg is a well known and reputable laboratory with facilities in Vancouver, B.C. Canada.
Sampling of core for all the diamond drilling phases was conducted by Brazauro. All samples were analyzed by Lakefield SGS Geosol laboratory. Recent geochemical samples collected by Brazauro were sent to the same laboratory.

12.1 CHANNEL SAMPLING

A total of 476 channel samples of saprolite (weathered bedrock) had been collected from the various garimpeiro pits within the Tocantinzinho Project area by Altoro. These were mostly 4-m horizontal samples from walls and floors of the available garimpeiro pits with a few vertical channels collected from the walls. Some of the pits (particularly the north part of the main pit) were sampled several times at different elevations as the garimpeiros continued to deepen the workings. Average length of the channel samples is 3.7 m. The average grade of these samples is 1.9 g/t Au. The results show a broad distribution of gold mineralization within the pits.
All the channel samples of this 1997-1999 Altoro sampling were assayed by Bondar Clegg of Vancouver, B.C., Canada.
No channel samples was used in the present resource evaluation.

12.2 SOIL SAMPLING

For a detailed description of soil sampling methods at Tocantinzinho please refer to Section 10.0 "EXPLORATION" of this report. The sampling methods and approach described in the Orequest Report are as follows. "Following their collection, the soil samples were transported to a panning facility at a pond near the camp. The samples consisted of clay rich laterite and saprolite and after weighing the sample the first step was to de-slime the sample in a large tub which washed away the clay. A small amount of detergent was used to reduce surface tension and minimize the flotation of fine gold. The remaining material was then panned and colors (pintas) counted. Tails from this first panning are collected and repanned with the colors from both stages of panning combined. Values ranging between 10 and 5,000 ppb were calculated for individual samples. Values in excess of 200 ppb appear to be anomalous. It is important to note that although reported as ppb, the pinta values are really only a numerical estimation of grade, this method should be adequate for comparing values of samples taken by common procedures from the same property but cannot be used for technical disclosure."

"The area underlying the principle anomaly has been almost completely removed by the garimpeiros. The pinta counting technique appears to be effective in defining anomalous areas but comparisons to assay techniques are not exact and, therefore, the resulting values should not be considered as assays. It is important to note that all geochemical techniques place little emphasis on the grade of the anomaly preferring to simply define an area that has above average numbers. The pinta counting technique seems to provide this degree of qualification."

"No comparison of pinta counting and assays for soil samples was completed by Altoro; however, 360 power auger samples were analyzed by both methods. Comparison of the assay versus pinta counting method readily shows that pinta counting generally underestimates the grade. Of the 360 samples tested only 22.5 percent of the pinta counts were higher than the assay and most of those were not significantly higher. The average grade of the 360 assays is 912 ppb versus 467 ppb calculated by the pinta counting method."

12.3 POWER AUGER DRILLING

For a detailed description of the Power Auger Drilling, as described in the Orequest Technical Report of July 10, 2003, please refer to Section 10 of this report.

During the program of power auger drilling at Tocantinzinho, quality control protocols were established to ensure the integrity of sampling results. These protocols included the preparation of duplicate samples and insertion of blank samples. The purpose of blank samples is to ensure that no contamination between samples has occurred in the lab or preparation facilities.

The comparison of sample results shows a 96 percent correlation between original sample assays and duplicates. Forty-one duplicate pairs of samples were tested and only seven sets differed significantly. In two of these cases the duplicate sample value was 100 and 30 percent higher, and in the other five cases the duplicate samples resulted in lower grades from 26 percent to 73 percent of the original sample result. These observations indicate discrepancies in 17 percent of the samples that may be due to nugget effect influence or sample bias during preparation. Duplicate samples average 88 percent of the samples original value.

12.4 DRILL CORE SAMPLING

Brazauro protocols for sampling and logging drill core are well defined and established. Drill core is retrieved each shift from the drill site and brought to camp. The geologist logs the full core and produces a "Summary Log." While he is logging the full core he measures and marks the intervals to be sampled, marking sequential sample divisions and numbers in the core. An attempt is made to make 2-meters-long sample intervals, diverging from these intervals for geological reasons, as for example rock type contacts.

Core recovery and engineering geological parameters are also noted from the full core. A line is drawn on the core, generally consistent with the geologist refitting all core together, as a guide for the core cutter.

The core is then cut in half along the indicated line by means of a diamond-bladed rock saw. After cutting the core in half, the core cutting laborer places both halves of the core back into the core-box and places the core-box on a logging table. When an entire hole's core or a long section of the core has been cut, two trained geotechnicians place half of the core into new sample bags and clearly mark the interval, on the ribs of the core box, with the interval footages and sample number. The bagged sample is clearly marked and tagged and enclosed for shipping to the laboratory. Groups of bagged samples are placed in larger sacks. These large sacks are marked, showing the sample numbers enclosed on the face of the large sacks. Samples are shipped to the SGS/Geosol laboratory at Itaituba.

The half core remaining in the core boxes is then logged in detail by the project's geologists. Core loggers make careful note of the rock types, veining, alteration, and mineralogy, estimating all the parameters shown on the individual drill log sheets. The percentage of sulfide is carefully estimated. Where native gold is observed in the detailed logging, those sample intervals are noted and sent to the laboratory for screened metallic assays. The free gold is extremely fine, generally visible only with the aid of a hand lens. Where free gold is observed its presence is marked on the core by dotted magic marker points surrounding the gold. A mark is also put on the core box rib for easy relocation. When analytical results are received they are typed into the core log sheets, at which points the logs are complete.

Summary and detailed logs as well as the sample intervals are typed into a computer each evening to keep the database current. Completed drill logs contain sample intervals, sample numbers and assay results, lithology, written notes, and an estimate of sulfides, veinlets by type, alteration by specific minerals, and structural data.

Based on earlier geochemical analytical results, which showed that there were insignificant concentrations of other metals, samples are analyzed for gold only. Specific drill core intervals have also been analyzed for total sulfur, copper and lead: all sample intervals of core hole TOC 06-35 were analyzed for these elements. Tocantinzinho drill core does not contain significant amounts of any deleterious element. No arsenopyrite has been observed in any drill core and generally the arsenic content of mineralized core is below the detection level for that element.

13. SAMPLE PREPARATION, ANALYSIS AND SECURITY

Tocantinzinho exploration samples were collected during exploration programs developed in 1997-1999 by Altoro. Samples that were sent for analysis during Altoro's programs were reportedly prepared at the CPRM (Companhia Pesquisa Recursos Mineração – the Brazilian Geological Survey) preparation facility in Itaituba. Two hundred gram pulps were prepared, and sent to Bondar Clegg in Luiziânia, Goias State. The samples were then shipped to the Bondar Clegg laboratory in Vancouver, Canada where they were analyzed by Bondar Clegg's Au 50 fire assay AA finish technique of gold analysis. The CRPM facility is no longer operating in Itaituba and it was therefore not possible to inspect it. The exact procedures used to assay the samples by Bondar Clegg are described below. PAH notes that Bondar Clegg is a well known and prestigious laboratory.

All of Brazauro's drill core samples, upon which the resource assessment is based, were analyzed by SGS Geosol Laboratory. Bagged core samples are shipped from Tocantinzinho to Itaituba by either bush plane or by a combination of boat and truck transportation. Previous to the existence of the SGS Geosol preparation facility in Itaituba, all core samples were shipped by truck from Itaituba to the SGS Geosol sample preparation facility in Parauapebas in the Carajas District of Para State. Prepared sample pulps were sent from Parauapebas to the SGS Geosol analytical laboratory in Belo Horizonte. Beginning in April of 2006, SGS Geosol opened a sample preparation facility in Itaituba. Since that time, all Tocantinzinho core samples have been prepared at the Itaituba facility. Sample pulps are still sent to the Belo Horizonte laboratory for chemical analysis.

Sample preparation check programs at Tocantinzinho were established to ensure the integrity of the samples. These systems included the preparation of duplicate samples as well as the insertion of blank samples.

13.1 ANALYTICAL METHODS AND QUALITY ASSURANCE

Quality assurance during the assaying process is established at the laboratory with well defined protocols for two different types of analytical methods as described below, depending on the types of samples.

For Geochemical Sampling:

- 0.50 grams of the sample is digested with diluted Aqua Regia solution by heating in a hot water bath, at about 95º C for 90 minutes, then cooled and bulked up to a fixed volume with de-mineralized water, and thoroughly mixed. Digested samples are allowed to settle over night to separate residue from solution.
- The specific elements are determined using an Inductively Coupled Argon Plasma (ICP) Spectrophotometer. All elements are corrected for inter-element interference. The resulting data are subsequently stored onto computer diskette.

Quality Control

The machine is first calibrated using three known standards and a blank. The samples to be tested are then run in batches.

A sample batch consists of 38 or less samples. Two tubes are placed before a set. These are an in-house standard and an acid blank, which are both digested with the samples. A known standard with characteristics best matching the samples is chosen and placed after every fifteenth sample. After every 38th sample (not including standards), two samples, chosen at random, are re-weighed and analyzed. At the end of a batch, the

standard and blank used at the beginning is rerun. The readings for these known values are compared with the pre-rack known assays to detect any calibration drift.
Note: Some mineral species may not be completely digested by Aqua Regia.

13.2 DRILL CORE AND ROCK ASSAY METHODS

Brazauro utilized the analytical services of SGS Geosol for all its drill core samples during each of the four phases of diamond drilling.
While the geologist completes preliminary logging of the full core, the core is marked for sample intervals. Sample intervals are generally two-meters long with exceptions made to accommodate geological contacts, alteration boundaries, and zones of strong mineralization. Sample intervals which contain visible gold are specifically marked for special sample preparation methods described below. The core is then sent to the core-cutting facility on site and cut in half by means of a diamond saw and placed back into the core box.
A specially trained sampling crew then removes one half of the core from the various pre-marked core intervals, placing each interval into a numbered and labeled plastic bag. The sample numbers are also appropriately marked on the ribs of the wooden core boxes for each sample interval.
Bagged samples are placed into larger bags, about ten samples per bag. Sample numbers in each bag are clearly marked on the outside of the large bags for easy identification and sorting at the analytical laboratory.

13.3 METHOD OF SAMPLE PREPARATION FOR ASSAYING

When samples arrive at the SGS Geosol sample preparation facility, they are placed into trays and dried at 110oC. When dry, the entire sample, usually about 2-3 kilograms, is crushed to minus 2 mm size and a 1 kilogram sample split is taken from the crushed product by means of a Jones splitter. This split sample is then ground to a -150 mesh pulp, and a 125 grams-size homogenized fraction removed: 50 grams of which are used for the analysis and 75 grams of which are stored in a marked envelope for future reference.
Prior to sample preparation, samples which have been marked specifically because visible gold had been observed during the rough logging of the full core are handled slightly differently from the normal samples. The entire sample is crushed and ground to -150 mesh. The sample is then passed through a 150 mesh screen. The undersize, the bulk of the sample, is weighed and treated exactly as a normal sample, with 125 grams extracted, 50 grams of which go for fire assay and 75 grams are stored for future use. The oversize is then collected, weighed, pulverized, and treated as a separate sample. Both analyses are reported separately but the laboratory calculates a weighted average of the two results in its final report. This reported single value is ascribed to the sample interval.

13.4 METHOD OF GOLD ANALYSIS BY FIRE ASSAY/AA FINISH

(a) 50 grams of the pulverized sample is weighed into a crucible which contains a combination of fluxes such as lead oxide, sodium carbonate, borax, silica flour, baking flour or potassium nitrate. After the sample and fluxes have been mixed thoroughly, a silver inquart and a thin layer of borax is added on top.
(b) The sample is placed into a fire assay furnace at 2000º F for one hour. At this stage, lead oxide is reduced to elemental lead and slowly sinks down to the bottom of

the fusion pot or crucible collecting the gold and silver along its way to the bottom of the melt.

(c) After one hour of fusion, the crucible is removed from the furnace and its contents poured into a conical cast iron mold. Elemental lead, which contains the precious metals, sinks to the bottom of the mold and any unwanted materials, the glassy slag, floats to the top. When cooled, the cone is removed from the mold and by hammering the glass is eliminated and a "lead button" formed.

(d) The lead button is then put onto a preheated cupel made of bone ash and reintroduced into a furnace for a second stage of separation at 1650º F. The lead button becomes liquefied and reacts with and is absorbed by the cupel. The gold and silver which have higher melting points remain on top of the cupel.

(e) After 45 minutes of cupellation, the spent cupel is then taken out of the furnace and cooled. The doré bead which contains the precious metals is then transferred into a test tube and dissolved in hot Aqua Regia solution heated by a hot water bath.

(f) The amount of gold in solution is determined with an Atomic Absorption spectrometer (AA). The gold value, in parts-per-billion, or grams-per-tonne, is calculated by comparison with a set of known gold standards.

Quality Control

Every 20th sample is duplicated in the laboratory and the laboratory inserts its own standards randomly for quality control. At the time the core samples are bagged, the sampling crew inserts its own control sample every 10th sample whereby a blank standard, a medium gold grade standard sample, or a high gold grade standard sample is inserted in the sequence of samples. Assay results of these standard samples are routinely monitored by Brazauro’s geological staff for both precision and accuracy.

14. DATA VERIFICATION

NCL has not collected any independent samples for data corroboration. NCL has found no inconsistencies in the data that would indicate that the data are significantly in error or not representative of the Project's mineral occurrences.
NCL site visit included a review of the geologic setting to confirm alterations and mineral evidences in the Project's area. Rock outcroppings, garimpeiro workings and some of the drilled areas were visited. Drill cores were examined at the project site.

14.1 CHECK ANALYSIS

The Bondar Clegg laboratory used for the sample analysis in the early stages of exploration routinely used internal sample checks to ensure quality control. NCL notes that Bondar Clegg is an internationally recognized laboratory.
Besides the routine internal standards and duplicate analyses performed during SGS Geosol's analytical work for all of the drill core samples, Brazauro routinely inserted its own standards. At the time the core samples were bagged, the sampling crew inserted its own control sample every 10th sample, whereby either a blank, a medium gold grade sample (1,805-ppb), or a high grade gold standard sample (8,367-ppb) was inserted in the sequence of samples. The standards were inserted in the field at regular intervals. In each batch of 50 samples, the standards were inserted at each nine samples; a low standard at the 10th and 20th sample, one blank at the 30th and one high standard at the 40th sample. The standard samples have been prepared and provided by Rock Labs from New Zealand.
In the first half of 2005, scoping metallurgical tests were completed on four composite samples prepared from 58 individual samples of mineralized drill core. Each sample was fire assayed by SGS Lakefield Geosol Laboratory of Belo Horizonte, Brazil. Coarse rejects from each sample were then shipped to Lakefield Research Ltd. of Lakefield, Ontario, Canada and the assaying of each sample was repeated. Fire assay results from the two laboratories returned nearly identical values. The figure below shows assay results of duplicate core samples used for metallurgical testworks.

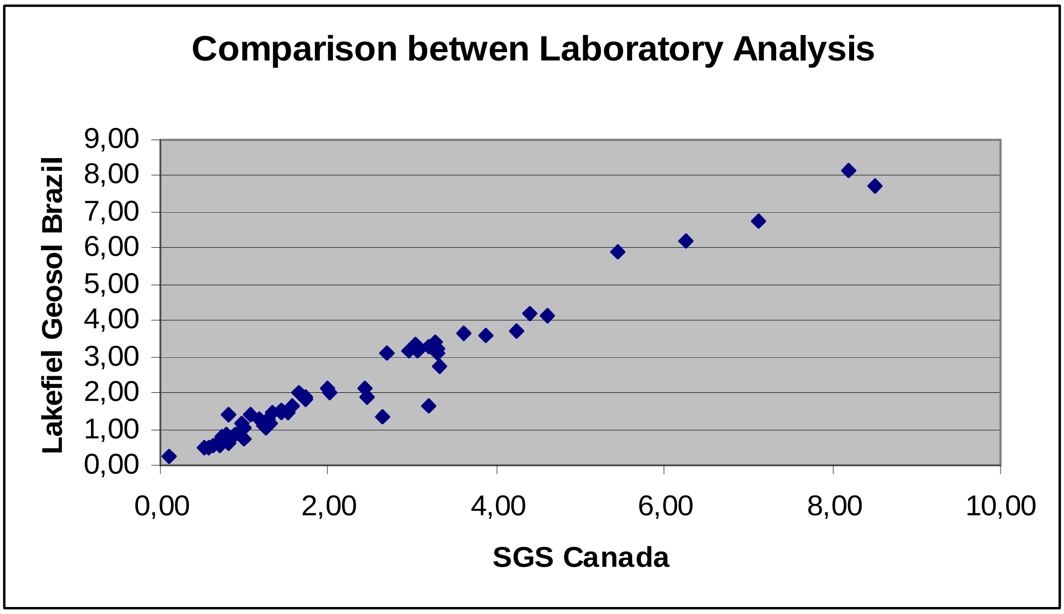


Figure 9 - Assay/Duplicates Lakefield Metallurgical Test Simples.

Duplicate routines graphics are shown below.

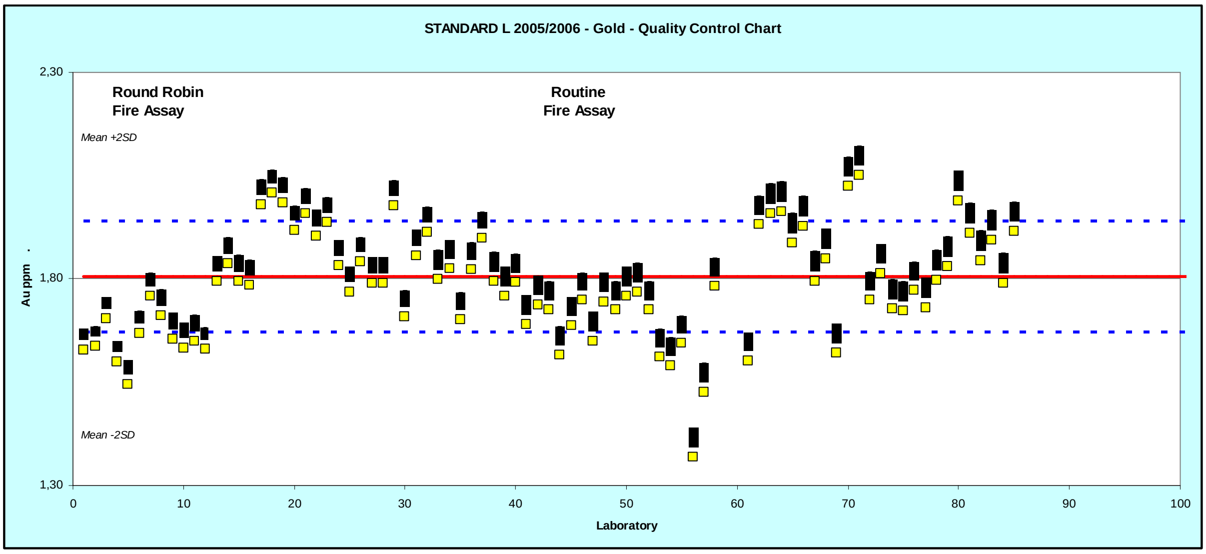


Figure 10 - Standard L 2005/2006

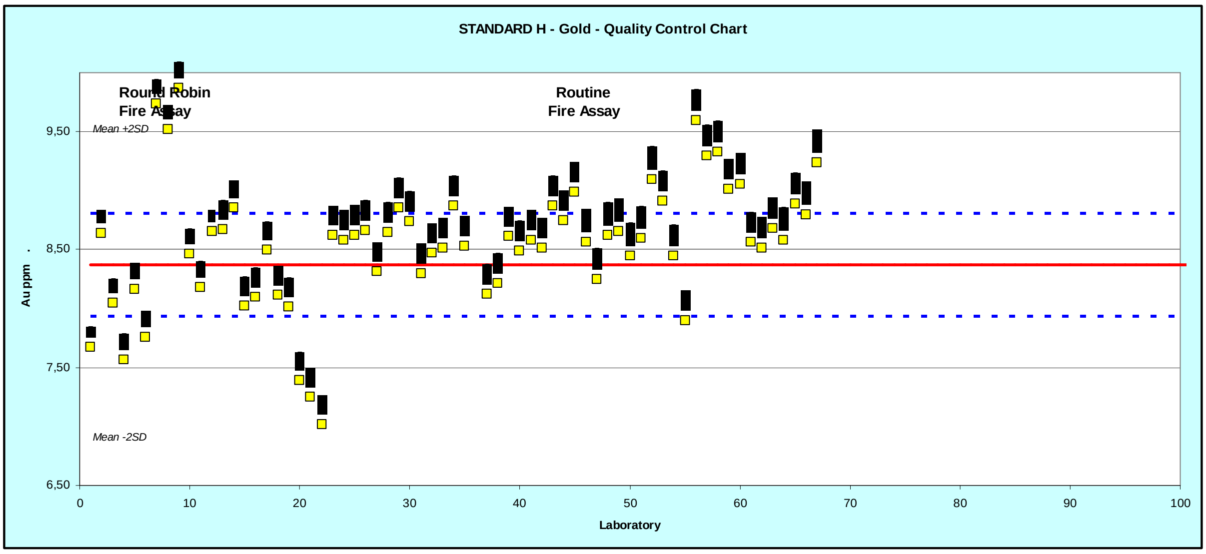


Figure 11 - Standard H

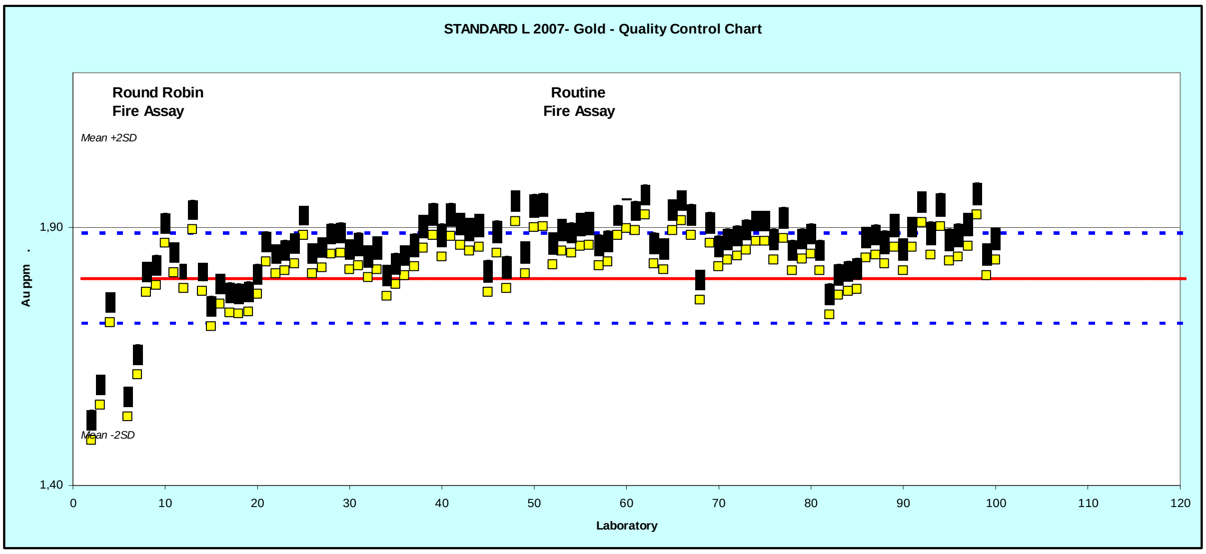


Figure 12 - Standard L 2007

Standard L 2005/2006 shows best distribution of results, as it does not have a significant bias, also it is noticed a cyclicity in the results.

Standard H presents a more random distribution, although in average the results is above the expected grade. At this range of results, 8.5 g/t, very few samples may be affected if any bias existed at the laboratory.

Standard L 2007 shows values in average over the expected results, but almost all results fit between limits accepted (2SD standard).

The conclusion is there is little evidence of any systematic or conditional bias. The correlation found is considered reasonably good for samples. Any variability in the sample results can be attributed to a number of conditions including differences in sample mass or half core versus quartered core.

It is therefore concluded that the analytical reproducibility is satisfactory, and that the analytical accuracy is equally acceptable.

14.2 CONCLUSIONS

The data verification work completed by Brazauro and NCL has led to confidence in the database compiled by the original operators of the property. NCL concludes that it is suitable for use in the mineral resource reported herein.

15. ADJACENT PROPERTIES

No data from any adjacent property were used in determining the mineral resources or to assess the economic aspects for the Tocantinzinho deposit.

16. MINERAL PROCESSING AND METALLURGICAL TESTING

This section was produced by the consultant Luis Bernal, a metallurgist with 24 years experience in the design and operation of processing plants of base and precious metals. He reviewed the available metallurgical tests and produced a recommendation for the route to be followed for the gold recovery.

16.1 SUMMARY OF THE AVAILABLE INFORMATION

The following information was revised. All studies were carried out using ore obtained from drill core.
Flotation test, gravimetric concentration and cyanidation, in Hazen Research
Flotation tests and Cyanidation of the concentrated in Hazen Research
Additional flotation tests by Ralph Meyertons
Tests of gravimetric concentration and cyanidation in Lakefield
The key aspects and results of these tests are commented in the following items:

16.2 FLOTATION TESTS, GRAVITATIONAL CONCENTRATION AND CYANIDATION IN HAZEN RESEARCH

In the study, "Characterization and process development of Tocantinzinho Gold ore Hazen Project 10470", the distribution of gold particle size was analyzed and the following processes were investigated: gravitational concentration, flotation and cyanidation of the mineral using samples with 1.0 to 1.7 g/t of gold grade.
The results obtained are:
At a size of 80 % - 190 microns it is possible to recover around 35% of the gold contained as coarse gold through gravity with a concentrate grade of 9,7 g/t.
At a size of 105 microns (or 150#) the recovery by flotation is around 93% of the gold with a concentrate grade of 64 g/t.
The extraction of gold by cyanidation ranges between 75-89% with cyanide consumption of 2.4 k/t.
These first results show that the process of flotation, integrated at mill stage, is more feasible than a gravitational circuit with centrifugal Knelson concentrators. Considering that the mine is too remote to transport concentrates, this study also recommends to use cyanide on the concentrates to produce bullion.
The circuit of flotation contains a rougher stage and a cleaning stage, with no addition of lime to modify the pH and using standard reagents.
The following is a summary of the results obtained in each process:

Heavy-Liquid Separation Results

Heavy-Liquid Product	Weight		Assay, g/t		Distribution, %	
	g	%	Au	Ag	Au	Ag
5-min grind						
35 by 400 Mesh Float	690.8	74.2	0.3	1.2	16.1	71.7
35 by 400 Mesh Sink	7.5	0.8	83.1	43.7	48.6	28.3
Minus 400 Mesh	232.6	25.0	2.0	n/a	35.3	n/a
Total Calculated Head	930.9	100.0	1.4	1.2	100.0	100.0
Assayed Head			1.7	<0.8		
10-min grind						
35 by 400 Mesh Float	699.4	69.8	0.3	0.4	13.3	42.3
35 by 400 Mesh Sink	5.2	0.5	150.9	73.8	49.3	57.7
Minus 400 Mesh	297.3	29.7	2.0	n/a	37.4	n/a
Total Calculated Head	1,001.9	100.0	1.6	0.7	100.0	100.0
Assayed Head			1.7	<0.8		
20-min grind						
35 by 400 Mesh Float	536.8	53.3	0.2	0.4	7.5	48.0
35 by 400 Mesh Sink	3.0	0.3	183.6	78.3	38.4	52.0
Minus 400 Mesh	467.1	46.4	1.645	n/a	54.1	n/a
Total Calculated Head	1,006.9	100.0	1.4	0.4	100.0	100.0
Assayed Head			1.7	<0.8		

n/a = not analyzed

Table 5 - Heavy Liquid Separation results for defining gold size distribution

16.2.1 Conclusion of the Flotation tests by Hazen:

Three flotation tests were conducted on rod-mill-ground pulps in a laboratory Denver 2-L subaeration cell at roughly 35% solids. All tests were performed at natural pH using potassium amyl xanthate (PAX) and a monothiophosphate salt (S-5688) as bulk sulfide and gold collectors, respectively. Test 2 also used a mercaptan (CO-100) in the grind as a gold collector. Dowfroth 250 (DF 250) was used as the frother. All three tests used a 2-min conditioning stage prior to 5-min rougher and 5-min scavenger stages. In Test 3, the rougher and scavenger concentrates were combined and floated in a 5-min cleaner stage to improve the gold grades. The flotation concentrates and tailings were assayed for gold. The detailed results of the three flotation tests are in Appendix B. In Flotation Test 1, approximately 94% of the gold was recovered. The gold grade in the rougher concentrate was 35.5 g/t. The weighted recovery of the combined rougher concentrates was 6.6%.

Flotation Test 2 used a mercaptan as the primary gold collector. Gold recovery was 96% for the combined rougher and scavenger concentrates. However, the gold grade in the rougher concentrate was 9.1 g/t Au and the weighted recovery of the combined rougher and scavenger concentrates was 26.1%. It appears that CO-100 might not be as selective with this ore type and will also float gangue. However, more flotation tests are required to determine if these results are valid.

Flotation Test 3 was a repeat of Test 1, except with a single cleaner stage. Gold recovery as 93.1% in the cleaner concentrate. The cleaner tails, which can be recycled, contained 2.9% of the gold. The gold grade was 63.8 g/t, almost double that of the Flotation Test 1 rougher concentrate. The weight recovery of the cleaner concentrate was 2.4%.

Humphrey Table Test Results				
Sample ID	Weight		Assays	Distribution, %
	g	%	Au, g/t	Au
Cleaner Concentrate	277.35	5.6	9.74	34.8
Cleaner Middlings	499.55	10.0	1.44	9.3
Cleaner Tails	24.54	0.5	14.88	4.7
Rougher Middlings	3171.00	63.5	0.45	18.4
Rougher Tails	1021.90	20.5	2.50	32.9
Calculated Feed	4994.34	100.1	1.60	100.1
Assay Feed			1.70	

Table 6 - Test results for Gravimetric separation

Cyanidation Results				
Sample ID	Au Extraction, %		NaCN Consumption, kg/t	CaO Consumption, kg/t
	Products Basis	Solids Basis		
2979-120, 5-min grind	74.9	67.9	2.03	0.71
2979-121, 10-min grind	88.7	87.9	2.40	0.76
2979-122, 20-min grind	85.4	87.9	2.40	0.86
3029-76, minus 10-mesh feed	75.9	71.1	0.55	0.96

Table 7 - Test results for cyanidation

16.2.2 Study conclusions:

Based on the gold characterization and beneficiation experiments conducted at Hazen, grinding followed by flotation appears to be the process that yields the highest gold recovery. Due to the remote location of the mine, cyanide leaching of a high-grade flotation concentrate may be a good option, but this has not been investigated.
Related to grinding requirements, a grind curve for an 8- by 9-in. laboratory soft-steel rod mill was established by grinding three 1-kg charges at 62% solids for 5, 10, and 20 min and screening at 35, 65, 150, and 400 mesh. The target grind of 150 mesh was based on prior work by SGS Lakefield (Lakefield, Ontario, Canada), which indicated that gold will be liberated at this size.

16.3 FLOTATION TESTS AND CYANIDATION OF CONCENTRATES IN HAZEN RESEARCH

The study "Bulk flotation of Tocantinzinho Gold ore and Cyanidation of final concentrates Hazen Project 10583"is the continuation to the previous one and it was targeted to generate a concentrate that could be treated by cyanidation.
The results are the following:
In flotation, a gold recovery between 85-90% was reached, which is lower than the obtained recovery in the previous study (93%). According to this analysis the low

recovery is due to the protocol of tests applied that consisted of loads of 10 kg of ore that were processed in a 12x15”mill with a grinding time of 60 minutes. This was needed to generate a higher amount of concentrate. Grinding curves were not made. This protocol is different from the normal process of preparing loads of 1-2 kg with grinding time of 20 minutes. Grinding too long in a mill batch with no classification produces a high proportion of ultra fines or mud that makes flotation difficult.
In cyanidation, an extraction of 98% of gold was obtained using 5 k of cyanide per tonne of concentrate. Lime consumption is 1.1 k/t and the time of residence is 48 hrs. All these parameters show that it is a low operational cost process.
Considering the gold recovery by flotation obtained in the previous study (93%) and the extraction of gold in cyanidation, the global feasible recovery is in the order of 91%. On the other hand, the amount of cyanide is low expressed in terms of processed mineral, therefore with a lower potential of environmental risk if compared to the process of direct cyanidation of ore.

16.3.1 Test conclusions:

The majority of the final bulk concentrate was used for a 48-hr cyanidation bottle-roll test to evaluate its leachability. Detailed cyanidation results are in Appendix B. Gold extraction was 98%, which indicates no problems with leaching this concentrate. However, cyanide consumption was high at 5.10 kg/t because of the sulfides present in the concentrate. As only 1% of the original weight is being subjected to cyanidation, this relatively high cyanide consumption is insignificant.

For the 10-kg batches, a 60-min grind produced a particle size distribution closest to the target of a nominal 150 mesh. The addition of CO-100 gold collector in the grind followed by flotation with PAX and a monothiophosphate salt can produce gold recoveries greater than 90%. A three-stage cleaner step can maintain a recovery of 85–90% with a grade of about 140 g/t.

16.4 ADDITIONAL FLOTATION TESTS BY RALPH MEYERTONS

Corresponding to the report: ”Investigation of flotation operating conditions and grind size upon Gold recovery” oriented to optimize the recovery and grade of concentrated.
The results obtained are:
The optimal size of flotation is 75% minus 200# or 75 microns (which is equal to a size of grinding P80 of 95 microns). This grinding is superior than the one used on previous tests which is 150# or 105 microns
With a higher intensity of grinding the gold recovery was optimized, reaching a 93.7 global versus 93% of previous tests.
The grade of the final concentrated also increased by the use of two or three stages of cleaning which allowed to obtained concentrated of 83 g/t of gold.
Following the results of this report:

RELATIONSHIP OF GRADE AND RECOVERY OF GOLD TO GRIND SIZE

Test number	Grind Size Cumulative % wt retained		Concentrate Grade (Calculated)		Gold Recovery
	100 mesh	200 mesh	Gold oz/ton	Gold ppm	Percentage %
Coarse Grind 3B (30')	4.6	46.0	3.73	128.	91.8
1C	14 (?)	46 (?)	2.80	95.9	92.1
Average			3.27	112.	91.95
Medium Grind 2B (45')	.05	24.5	2.14	73.6	93.9
3C	0.5	24.5	2.69	92.3	93.4
Average			2.41	83.0	93.7
Fine Grind 2A (60)'	0.02	11.1	1.96	67.3	91.5
3A	0.02	11.1	2.81	96.3	94.2
Average			2.39	81.8	92.9

Table 8 - Relationship between grade-recovery and grind grade

SUMMARY - GRIND - FLOTATION TESTS ON BRAZAURO ORE "TZ"

TEST #		GRIND TIME	SIZE % +100 m	Size % +200 m	ASSAYED FEED	CALCULATED FEED ASSAY ppm Au	COMBINED TAILING % WT	COMBINED TAILING ASSAY ppm (G/T)	COMBINED TAILING % LOSS	FINAL CONCENTRATE % WT	FINAL CONCENTRATE ASSAY ppm (G/T)	FINAL CONCENTRATE % RECOVERY	ASSAY Oz/T GOLD
1A	Calculated Rougher Concentrates	30	14		1.459		97.6	0.328	22	0.56	46.7	78	1.36
1B	Calculated Rougher Concentrates 2CC	30	14		1.459		97.3	0.17	11.3	2.75	47.1	88.7	1.37
1C	Calculated Rougher Concentrates 2CC	30	14		1.459		98.6	0.119	7.9	1.4	95.9	92.1	2.8
1D		30	14		1.459	1.67	96.5	0.13	9.5	3.5	44.7	90.5	1.3
1E		30	14		1.459	1.7	95.0	0.07	3.9	5	32.8	96.1	0.96
2A	Average 2CC	60	0.02	11.1		1.89	98.0	0.128	6.6	2	87.8	93.4	2.56
	Calculated 2CC				1.48		98.0	0.128	8.5	2	67.3	91.5	1.96
2B	Average 2CC	45	0.5	24.5		1.35	98.0	0.098	7.1	2	62.5	92.9	1.82
	Calculated 2CC						98.0	0.098	6.1	2	73.5	93.9	2.14
3A	Average 2CC	60	0.02	11.1		2.07	98.6	0.086	4.1	1.44	137	95.9	3.99
	Calculated 2CC						98.6	0.086	5.7	1.44	133	94.3	3.88
3B	Average 2CC	30	4.6	46		1.06	98.9	0.123	11.5	1.06	88.1	88.5	2.57
	Best Metal Balance					1.41	98.9	0.123	8.6	1.06	121.2	91.4	3.54
3C	Average 2CC	45	0.5	24.5		0.93	98.5	0.099	10.4	1.5	55.9 av	89.6	1.63
	Best Metal Balance						98.5	0.099	6.6	1.5	92.2	93.4	2.69

Table 9 - Summary of flotation tests

16.4.1 Test Conclusions

The data shows that the medium size grind, all passing 100 mesh, about 7% retained on 150 mesh, and about 25% plus 200 mesh is the best. Almost 94% recovery was achieved into a concentrate that contained 2.4 oz/ton gold (83 ppm Au or grams/metric ton). The upgrading ratio was 56 to 1. Concentrate weight was 1.75% of the feed (the average of two tests).

16.5 GRAVITATIONAL CONCENTRATION TESTS AND CYANIDATION IN LAKEFIELD

The study "Gold recovery from Tocantinzinho properties samples, project LR 10794 of SGS Lakefield", was based on gold gravitational recovery followed by cyanidation of its tailings and whole-rock cyanidation..
The results obtained are:
The gold gravitational recovery varies between 15% and 42% according to the gold grade of the ore fed. For this process, a rougher concentrator Knelson and a Mozzley cleaning concentrator was used. The grind grade P80 required is 45-75 microns.
Recovery by cyanidation of tailings of the gravitational concentration varies between 92 and 97%. Therefore, global recuperation of gravitational separation plus cyanidation depending on the head grade varies between 93.3% and 98.3%.
Recovery by cyanidation applied to all of mineral varies between 92.9% and 98.8%
Compared to previous studies, higher recoveries in cyanidation are obtained because:
The grind grade is thinner applying P80 of 65 microns versus 105 microns
The head grade is higher, the composites A and B are comparable to samples used previously with grade of 1,5 g/t and in these, recovery of 93,3 and 98,3% were obtained.
It is important to characterize the lithology associated to these samples since the component A has grade of 1.48 g/t versus 0.97 g/t of component B, although a low recovery is obtained.
In Hazen's study a recovery of 88-89% was obtained with P80 of 105 microns in a ore of 1.7 g/t grade.
According to these results it is possible to apply this process mainly because of the gold global recovery reached, although it has disadvantage due to the higher costs of Capex and Opex, and for higher environmental risks due to a higher usage of cyanide present in the tailings.

Following a summary of the results obtained:

Metallurgical Results

		Comp A Average Grade	Comp B Low Grade	Comp C Moderate	Comp D High Grade
Direct Head Grade (Screened Metallics), g/t Au	=	1.48	0.97	4.05	12.3
Average *Calculated* Head Grade from the Testwork, g/t Au	=	1.48	1.02	3.88	10.9
Grind Size, P_{80} µm	=	66	75	65	45
Gold Recovery by Gravity Separation , %	**=**	**15.1**	**28.3**	**38.8**	**41.9**
Gold Recovery (unit) by Gravity Tailing Cyanidation, %	=	92.2	97.6	97.0	97.2
Gold Recovery by Gravity Separation + Cyanidation, %	**=**	**93.3**	**98.3**	**98.2**	**98.4**
Gold Recovery by Whole Ore Cyanidation, %	**=**	**92.9**	**96.6**	**98.1**	**98.8**

Table 10 - Gravitational/Cyanidation Results- 1

Gravity Tailing Cyanidation Results

Comp	From Gravity Test	Test No.	Feed Size, K_{80}, µm	Reagent Consumption kg/t of CN Feed		% Au Recovery / Extraction					Residue Grade	Head Grade Calculated, Au, g/t	
				NaCN	CaO	Grav Sep.	Cyanidation 7 h	Cyanidation 24 h	Cyanidation 48 h	*Gravity + CN*	Au, g/t	CN Feed	Overall
A	GS-2	CN-2	66	0.10	0.40	*15.1*	80	89	92.2	***93.3***	0.10	1.21	1.33
B	GS-1	CN-1	75	0.09	0.46	*28.3*	86	96	97.6	***98.3***	0.02	0.85	1.02
C	GS-3	CN-3	65	0.11	0.40	*38.8*	94	97	97.0	***98.2***	0.07	2.19	3.55
D	GS-4	CN-4	45	0.20	0.52	*41.9*	90	98	97.2	***98.4***	0.16	5.82	9.89

Table 11 - Gravitational/Cyanidation Results - 2

16.6 CONCLUSIONS

For the processing of Tocantinzinho’s ore two possible ways of processing the gold extraction exist:

- ⇨ Flotation followed by cyanidation of the concentrate;
- ⇨ Whole-rock cyanidation;

Based on environmental considerations, investment and operational costs for this scoping study, it is recommended to consider flotation followed by cyanidation of the concentrate for the following reasons:

- ⇨ Less environmental risk due to lower use of cyanide (600 kg/day versus 13,000 kg/day)
- ⇨ Lower capex because of the following factors:
  - □ Smaller grind equipment size (comminuting to 105 microns, instead of 65 microns)
  - □ Lesser residence time (20 minutes versus 48 hrs)
- ⇨ Lower Opex because of the following factors:
  - □ Lower energy consumption (lower grinding and residence time)
  - □ Lower costs in reagents due to lower consumption

The expected recovery of the ore will be in the order of 91%, considering that the flotation recovery averaged 93% and the cyanidation of the concentrates recovered 98% of the gold, as shown by Hazen Research.

Since in an economic evaluation the impact of gold recovery can be more relevant than the operational costs, for a Feasibility Study a trade off study is recommended to examine both alternatives with a previous stage of gravitational separation. For an adequate evaluation it is recommended to use a representative sample of the deposit´s geometalurgy, considering the different lithologies and grades and estimating the costs more precisely.

17. MINERAL RESOURCES/RESERVES

NCL used for the present work a strategy consisting of 3D modeling and geostatistics. Only a single ore type was considered in this evaluation.

Mineral resources reported herein were estimated and classified according to the Australian JORC Code and are reported here in terms equivalent to those of the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) as required by Canadian National Instrument 43-101.

17.1 SOFTWARE USED

The modeling and geostatistics analysis of the deposit was carried out using two different software packages: Gemcom (modeling, kriging and block model construction, modeling and exploratory data analysis, model validation) and GSLIB (variography and exploratory data analysis).

17.2 DATA BASE

Data was supplied by Brazauro in Excel format, consisted of drilling information with assays, geology and topography. Only diamond drillholes were supplied, therefore the channel samples mentioned in the item 12.1, were not used in this estimation.
The drillholes database was validated using the standard tools from GEMCOM and Excel. All the problems detected were reported to Brazauro and were corrected. The methodology used by Brazauro for data entry and validation was checked and found to be robust. Brazauro has drilled 17.237,37 meters in 71 drillholes.
The general statistics of the assay data is given in the table below.

Fresh Rock	Au Fresh	Oxide Rock	Au Oxide
Min	0.00	Min	0.01
Max	374.40	Max	9.84
Count	3,721	Count	101
Count AU=0	24	Count AU=0	0
%AU=0	0.64%	%AU=0	0.00%
Mean	1.464	Mean	0.919
Desv pad	6.92	Desv pad	1.31
Coefic Var	4.73	Coefic Var	1.42
Var	47.92	Var	1.71

Table 12 - Samples basic statistics from inside of the orezone

17.3 SPECIFIC GRAVITY

Data from 35 Bulk Densities Wax Density weight of rock were received from Brazauro. Basically, the density of mineralized granite and waste andesite was measured. The values adopted for these two types are the average of each group. For saprolite and barren granites, values from similar projects in the region were used. The adopted values are listed in the table below, compared with the ones used in the PAH study.

Rock Type	New Density (g/cm3)	Old Density (g/cm3)
Andesite Dike	2.82	2.73
Orezone	2.67	2.67
Waste	2.70	2.67
Saprolite	1.80	2.00
Taillings	1.80	1.50

Table 13 - Density values adopted for the different rock types

17.4 SELECTION OF REPRESENTATIVE SAMPLES

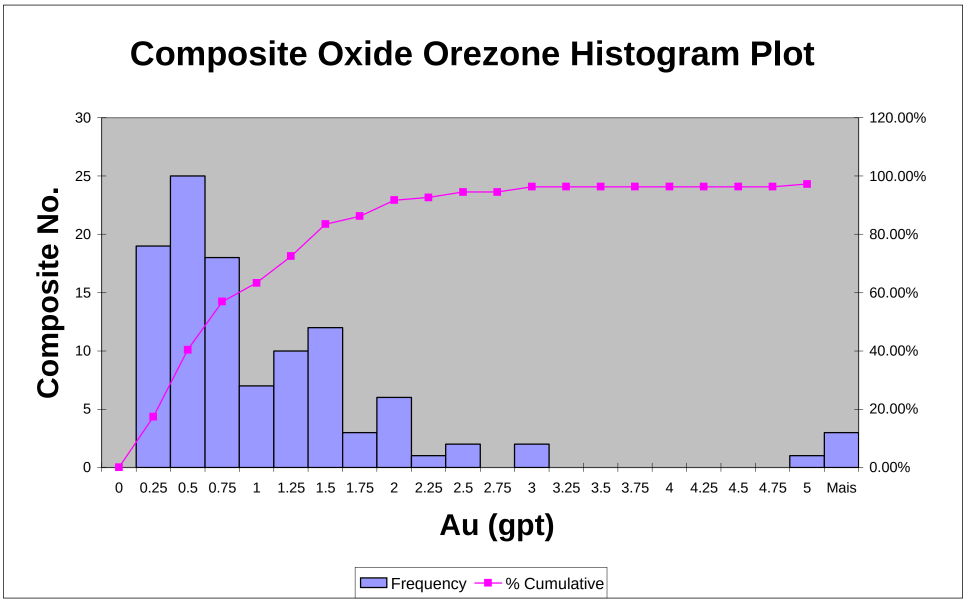
A cutoff of 0.2 g/t was used to delineate the resource boundaries. The reason for choosing this value is that the deposit is a continuous orezone rock with abrupt contacts, in addiction of low costs of open pit mine production which should allow the mining of low grades.
All the intervals that meet these criteria were selected individually, section by section and for each interval were assigned the Orezone code. In some places, sub economical intervals were selected based on the geology, to maintain continuity of the rock. To estimate the inclusion or not of internal waste, the average grade was calculated to verify if the economical criteria (> 0.2 g/t) would be met.

17.5 COMPOSITING

Compositing, i.e. transforming the samples to a fixed length in order to have all values at a similar support, is a necessary step before interpolation of results. After a statistical analysis of the length of the original samples, 2.0 m and 5.0 m were chosen for testing. The 2.0 m compositing was selected because this value best represent the mode of the samples and its variograms showed better structures than the ones produced with 5 m length composites. Almost 75% of the distributions of lengths have 2m length, therefore choosing this length for composition would preserve the detail obtained in the sampling, while still having a good statistical agreement between samples and composites.

Stats	Samples	Composites 5 m	Composites 2m
Min	0.0	0.0	0.0
Max	374.4	21.8	30.0
Count	3721	1384	3407
Mean	1.46	1.29	1.30
Desv pad	6.92	1.75	2.26
Coefic Var	4.729	1.359	1.738
Var	47.918	3.072	5.099

Table 14 - Basic statistics for samples and composites inside the orezone



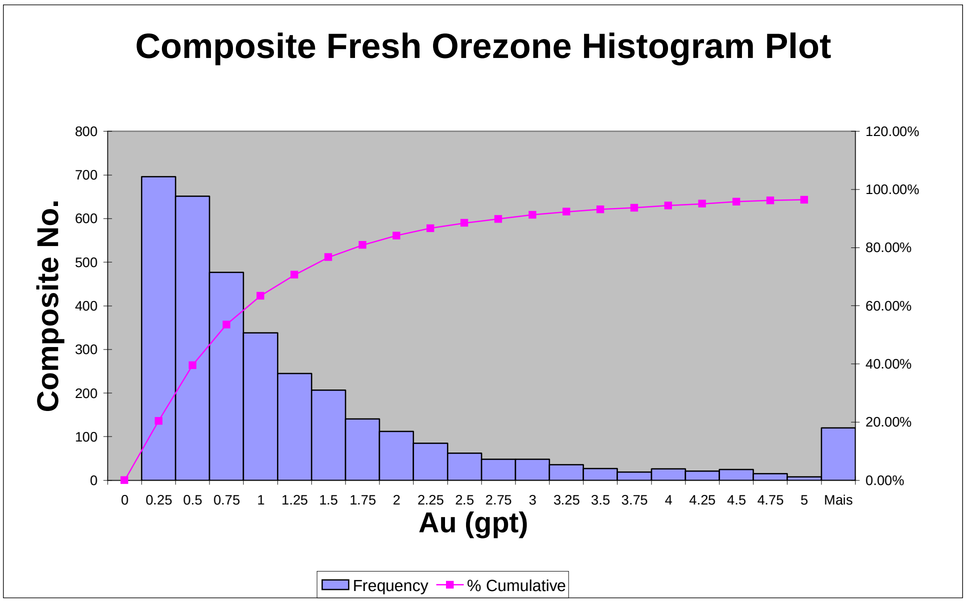


Figure 13 - Histograms – Oxide and Fresh rock mineralization samples

All missing values were excluded from the database used for geostatistics.

17.6 3D MODELS

Brazauro provided hard copies of geological vertical sections. These sections were digitized in GEMCOM to develop a geologic and resource model for the Tocantinzinho gold project. The geological outlines were drawn in 17 vertical cross sections, at 50m intervals orientated at N38.6°E, perpendicular to the main strike of the deposit. The saprolite limit and the tailings surface were defined using the drillholes information.

Four different solids were used in the construction of the block model:

1. Orebodies: the zones representing the material with reasonable prospects of being economically mined
2. Intrusives: andesites that cut the mineralization, considered as waste. These solids have precedence over the orebodies

3. Surface separating the oxide (weathered) and fresh rock zones
4. Topographic surface based on survey data.

The orebodies modeling criteria were as follows:

- All contact lines were snapped to the drillholes.
- The contacts were usually interpreted as vertical. Down dip extension was limited to a maximum of 50 m.
- Linking between two sections was limited to a maximum of 50 meters. Extension along the strike was limited to 25 m.
- The geological map, developed by Brazauro, was used to define the orebody close to surface.

The same rules are used for the intrusive rocks interpretation.

17.7 BLOCK MODEL PARAMETERS

For the construction of the block model, the codes listed in Table 15 were used.

ROCK TYPES	MEANING
300	WASTE
200	ORE
100	INTRUSIVES

Table 15 - Zone Codes in the Block model without sub variations

The block size used was 10 x 10 x 5 m, based on discussions with Antonio Couble, the chief planning engineer from NCL in charge of the open mine planning. It is recognized that a larger block would allow less conditional bias, as compared to the initial proposal of a block of half the drill density, in the order of 25 x 25 x 10m. However, a block of this size would be inadequate for mine planning.
Below, in Table 16, are the specific parameters for each block model:

	ORIGIN (m)	BLOCK SIZE (m)	NR BLOCKS
X	577,565.000	10	137
Y	9,330,065.386	10	121
Z	260	5	112

Table 16 - Block model parameters

17.8 POPULATION ANALYSIS

NCL investigated the possibility of separating two different populations: a higher grade core and a lower grade fringe, which was observed by Brazauro. However, the contact of the two zones is transitional. Therefore, separating the population in two different populations would not help in the resource estimation. The figure 14 depicts this zoning based on the gold grade.

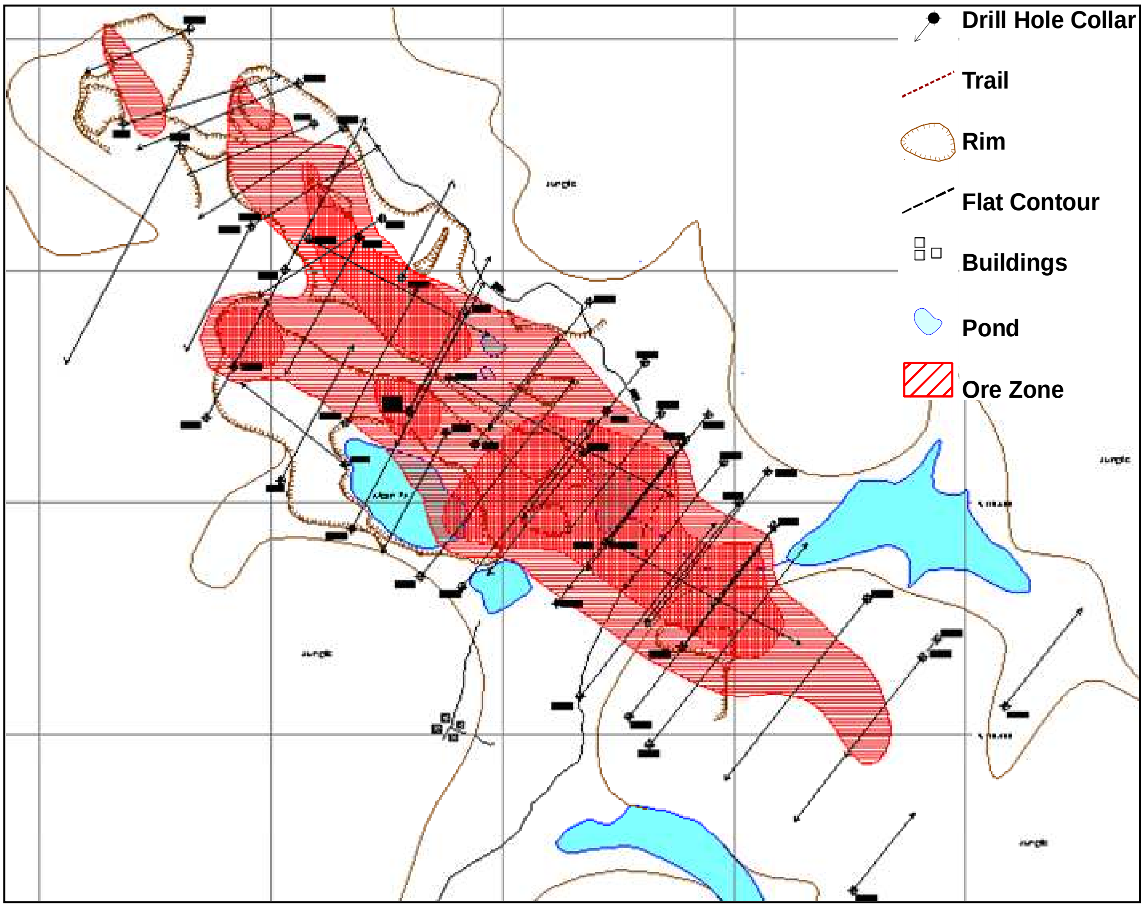


Figure 14 - Map showing the two different mineralized zones

17.9 VARIOGRAPHY

Two different types of software were used to carry out the anisotropy analysis, GSLIB and GEMCOM. Variogram maps were used but the result was not helpful.
A better result was obtained just aligning the variogram with the strike of the orebody, along the azimuth 128°. Two directions were tested: a vector dipping to SE, following the shape of the orebody, and another to NW, as suggested by the alignment of high grade zones. The former presented better results, therefore it was used.

Correlograms were also tested, but the standard semi-variogram showed better structure in most situations. Therefore, only semi-variograms were used for modeling.

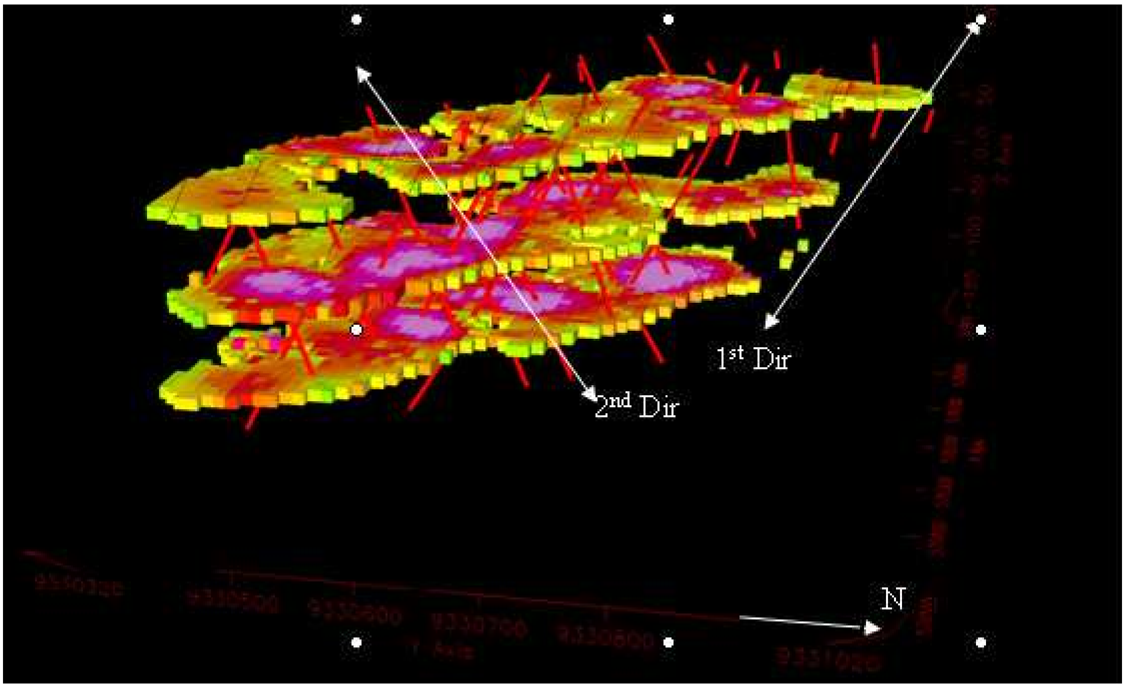


Figure 15 - Geological anisotropy along the orezone body.

The variography parameters used in the kriging are listed below on table below. The nugget effect was obtained from the down the hole variogram.

Experimental and model variograms

PROJECT :	Tocantinzinho
UNIT :	Orezone sulf
VARIABLE :	Comp 2m

N°Structures

MODEL	
C0 - NUGGET	0.31
C1 - 1st Structure	0.57
C2 - 2nd Structure	0.12
C3 - 3rd Structure	0.00
A1 - 1st Range Y	6
A2 - 2nd Range Y	24
A3 - 3rd Range Y	

Experimental and model variograms

PROJECT :	Tocantinzinho
UNIT :	Orezone sulf
VARIABLE :	Comp 2m

N°Structures

MODEL		Type
C0 - NUGGET	0.31	
C1 - 1st Structure	0.44	1
C2 - 2nd Structure	0.25	1
C3 - 3rd Structure	0.00	1
A1 - 1st Range X	16	
A2 - 2nd Range X	44	
A3 - 3rd Range X	0	
A1 - 1st Range Y	6	
A2 - 2nd Range Y	24	
A3 - 3rd Range Y	0	
A1 - 1st Range Z	15	
A2 - 2nd Range Z	25	
A3 - 2rd Range Z	0	

Search ranges (95% of Variance)	
Direction 1	*30*
Direction 2	*15*
Direction 3	*20*

	Azimuth	Dip
Direction 1	*128*	*-45*
Direction 2	*218*	*0*
Direction 3	*308*	*-45*

Table 17 - Variogram parameters

The figure 16, presents the down the hole variogram (made to identify the nugget effect) and three other variograms, the first in the direction with best continuity, and the third to the poorest. All of the variograms were calculated with a lag separation of 20 m, and using a tolerance on azimuth and dip of 30°. All models are spherical. Search ratios normally are equivalent to 90% of the range of the variogram.

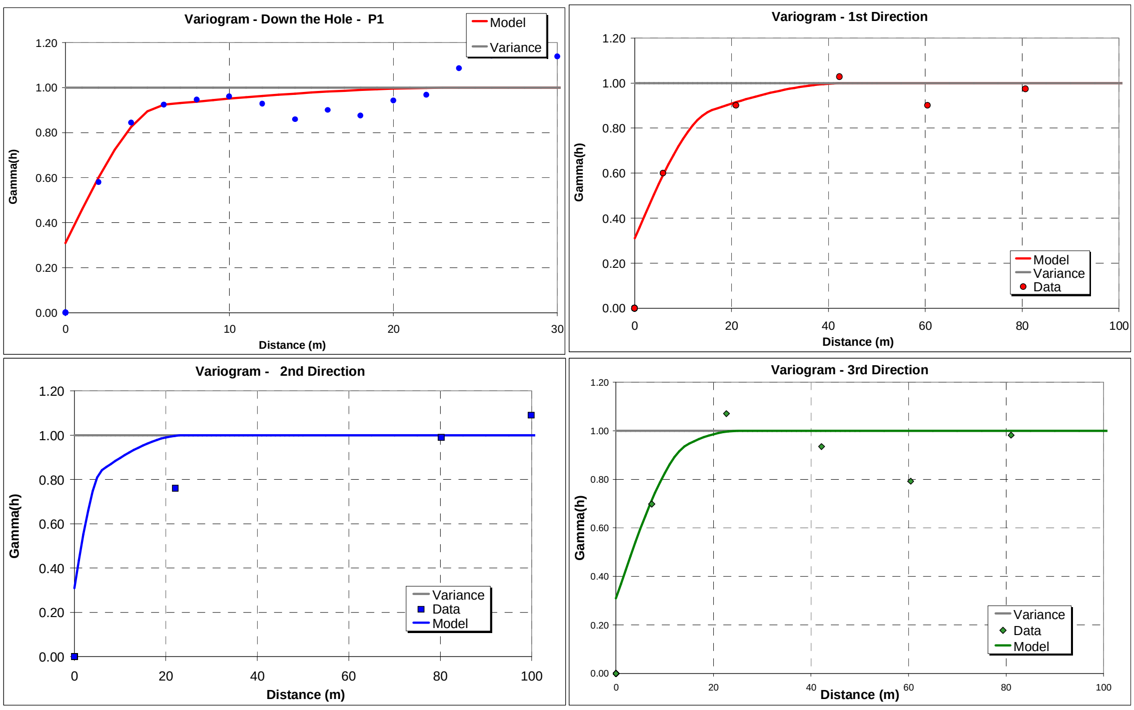


Figure 16 - Variogram from the fresh rock zone analyzed for 2 m composites.

17.10 OUTLIER ANALYSIS

Figure 17 represents the probability graphs that were used to define the threshold to cap the outliers of studied population. The objective is to limit the influence of very high values on the interpolation of grades. If the high values stay in the expected position (a straight line in the high end of the probability graph) they may be considered part of the population and used in the estimative. Otherwise, they may be capped, to have their value reduced to a selected threshold. A common threshold is the one where 99% of the samples have grade less than that, but it depends on many other factors, like the adherence of the kriging values to the moving average, the geology, etc. A value of 30 g/t was chosen, based on the inflection of the curve at this grade. 15 samples had their grade reduced to 30 g/t.

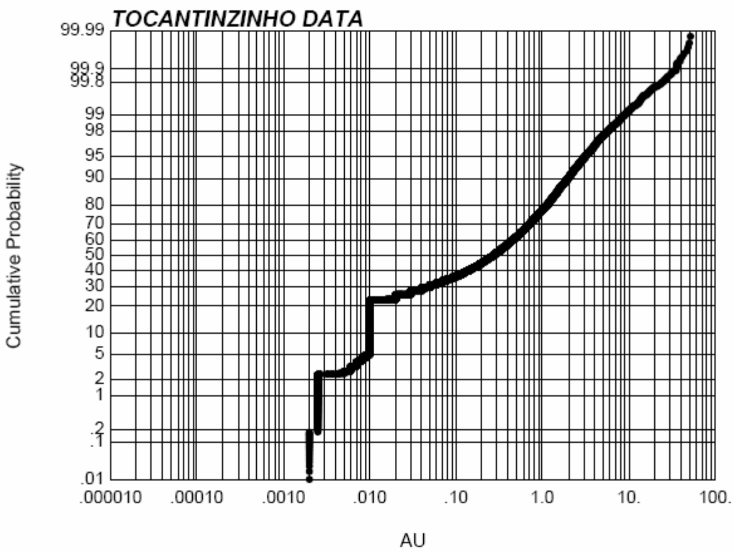


Figure 17 - Probability plot, for identification of outliers

17.11 KRIGING STRATEGY

Initially, the stationarity of the deposit was investigated through a moving window technique. The conclusion is that the deposits are non-stationary i.e. the average and variance change according to the position in the deposit; therefore simple kriging cannot be used. It was decided to use ordinary kriging instead.
Nine passes were used. The four good initial passes were used to define the indicated resources. The inferred blocks were estimated by extrapolation of the dimensions of the search variogram by multiples values, in five additional passes.

Kriging pass	Anisotropy X	Anisotropy Y	Anisotropy Z	No Octants	Maximum SMP
1	30	20	15	4	8
2	15	10	7.5	2	8
3	60	40	30	4	8
4	30	20	15	2	8
5	90	60	45	4	8
6	45	30	22.5	2	8
7	120	80	60	4	8
8	60	40	30	2	8
9	180	120	90	1	8

Table 18 - Kriging strategy for Tocantinzinho gold deposit

17.12 BLOCK MODEL CONSTRUCTION

The sequence of block model construction in the GEMCOM software is the following:
1. Print the intrusive modeled solids into blocks in order 1 of precedence
2. Print the orezone modeled solids into blocks in order 2 of precedence
3. Print the densities into blocks according to the lithology
4. Kriging of the economical orezone
5. Extract the blocks above surface
6. Classify the resources into indicated and inferred

17.13 MINERAL RESOURCE CLASSIFICATION

The classification methodology adopted by NCL and the criteria established as follows:

- Indicated resources: blocks which have at least two mineralized intercepts in the neighborhood. The rock code of these intercepts must be same as the block being classified, and the intercepts must be from different octants. The indicated blocks were classified in accordance with the kriging steps. Up to the fourth step the resources were considered indicated.
- Inferred resource: All the remaining blocks included in the geological solids, which were not classified as indicated except the other rock types, which include the intrusives and waste solid. The concept is that during the geological interpretation, the geologist could not extend the known intercepts to a distance greater than the reasonable for defining inferred resources. Section 17.6 details the distances used for extrapolation of the drill intercepts in order to define the orebody dimensions and, consequently, the limits of the inferred resources.

The inferred resources are dependant on the geological interpretation but in general the extrapolation follows the rules established in section 17.6. The mineralized zone has been seen by the geologists as a continuous, massive and unique rock unit that has a good extension, consequently generating additional inferred resources. The figure 18 shows an example of the distribution of the classified blocks in relation to the mineralized intercepts.

Important note: Resources were considered only if the grade of the block is above 0.2 g/t Au. Part of the rocks, in zones with lower grade, were not considered mineral resources, since the possibility of being economic is minimal

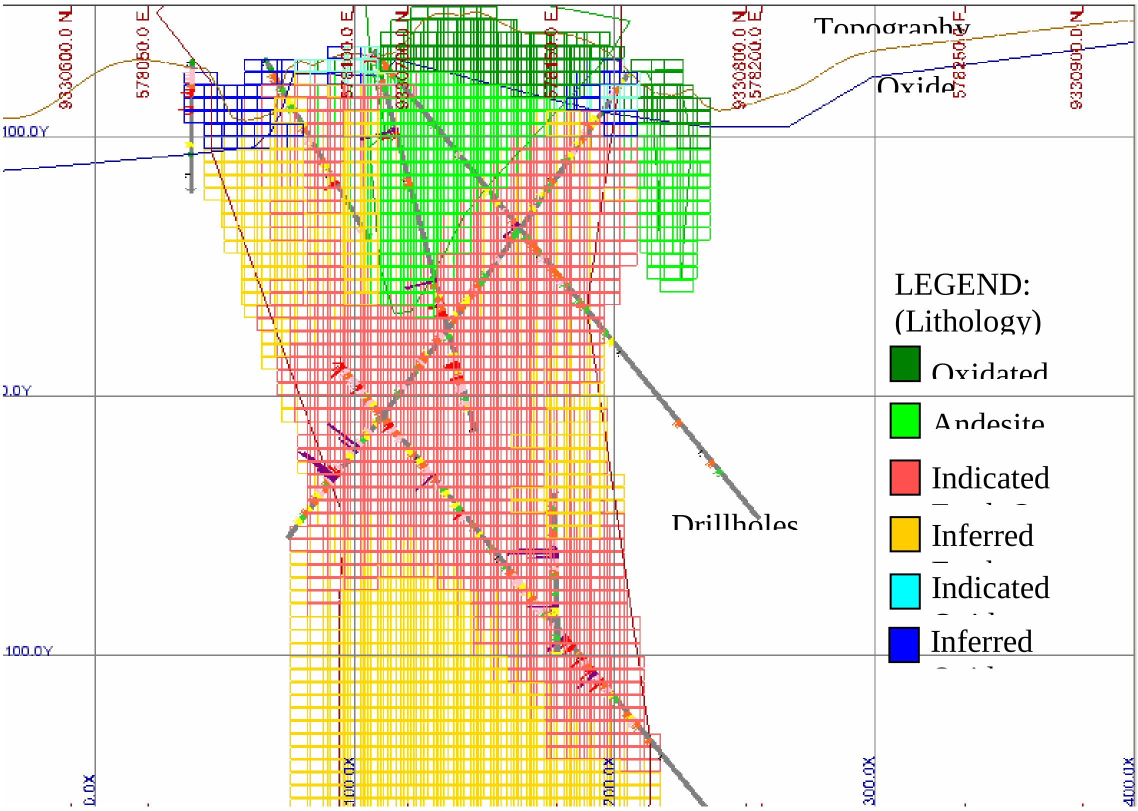


Figure 18 - Classified blocks inside of the 0.2 g/t envelopes.

17.14 MODEL VALIDATION

To verify the results of the estimation, a set of checks were made on the model for each area:

- •Visual validation of grades and the classification.
- •Comparison with the previous sections and tabulations
- •Comparison between the floating window average grade of composites and kriged values (Figures 19 to 21).
- •The kriging results were checked against estimates done using the nearest neighbor method

In all tests the models were considered consistent and robust.

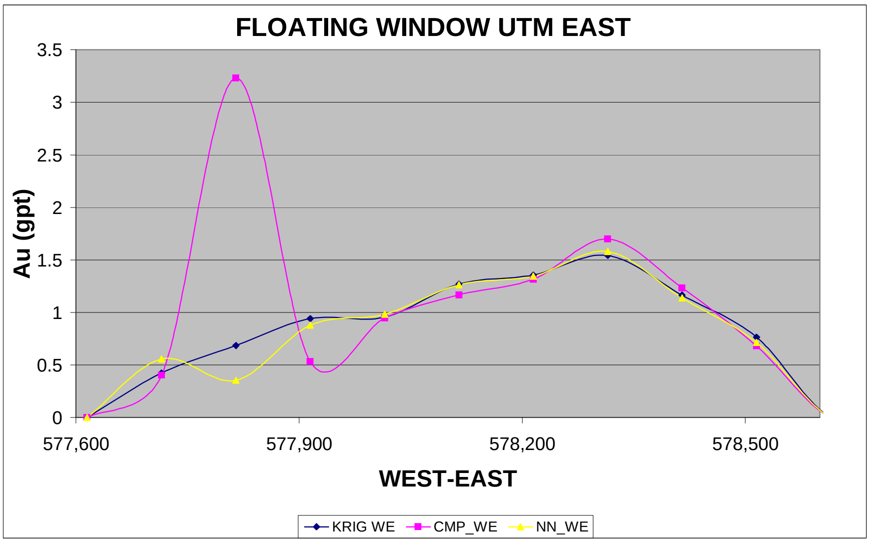


Figure 19 - Floating window along West-East.

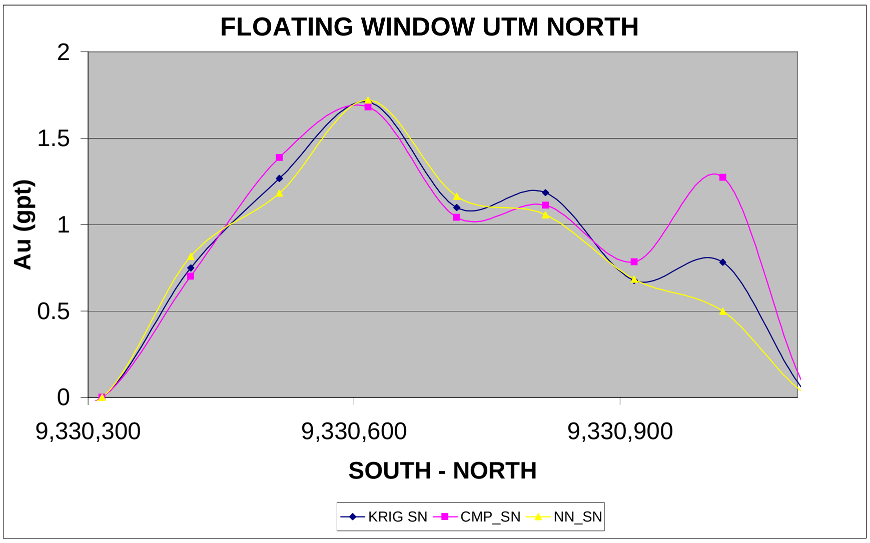


Figure 20 - Floating window along South-North.

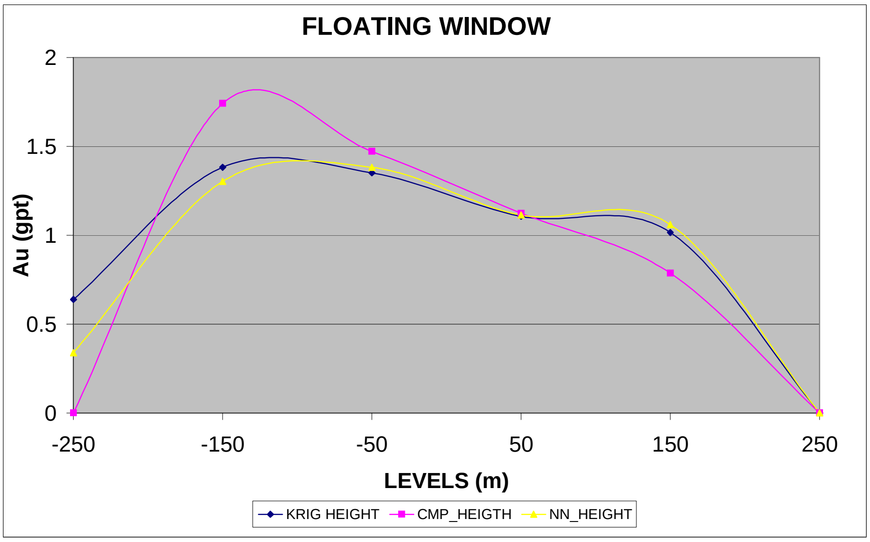


Figure 21 - Floating window along levels (height)

17.15 RESULTS

Table 19 summarizes the mineral resources above 0.2 g Au/t. (see the item 17.4 for explanation about the choice of this cutoff). Tables 19 and 20 provide an overall resource divided by classification summary and different materials while table 21 gives the grade/tonnage per cutoff, including the blocks below the resource cutoff.

The graphic of tonnage and gold grade divided by rock type (fresh and oxide rock) can be observed on figure 23 which shows the tonnage and grade at different cut-off grades.

Total Resources (Above Cut off 0.2 g/t)					
Class	Volume M3x1000	Tonnage ktons	Grade Au g/t	Gold Content Kg	Gold Content koz
Indicated	9,245	24,597	1.33	32,756	1,053
Inferred	10,760	27,704	1.18	32,604	1,048

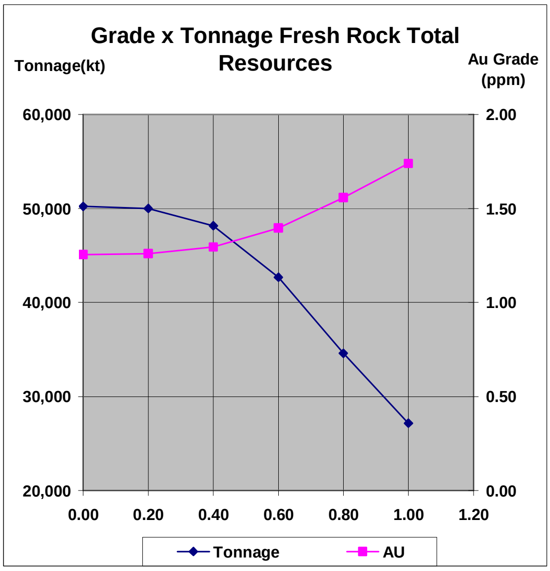
Table 19 - Total resources above Cutoff 0.2 g Au/t.

	Indicated				Inferred		
	Tonnes (x 000)	Au (g/t)	Ounces (x 000)		Tonnes (x 000)	Au (g/t)	Ounces (x 000)
Oxide	183	1.12	7		2,120	1.03	70
Fresh rock	24,413	1.33	1,047		25,585	1.19	978
Total	**24,597**	**1.33**	**1,053**		**27,704**	**1.18**	**1,048**

Table 20 - Total resources by type

	Grade Group	Tonnage ktons	Grade Au g/t	Gold Content Kg	Gold Content koz
Fresh Indicated	1 - 9999	13,844	1.839	25,460	819
	0.8 - 1.0	17,077	1.661	28,357	912
	0.6 - 0.8	20,556	1.498	30,792	990
	0.4 - 0.6	23,237	1.384	32,169	1,034
	0.2 - 0.4	24,413	1.333	32,551	1,047
	0 - 0.2	24,581	1.325	32,575	1,047
	Total	**24,581**	**1.325**	**32,575**	**1,047**
Fresh Inferred	1 - 9999	13,323	1.634	21,767	700
	0.8 - 1.0	17,507	1.457	25,514	820
	0.6 - 0.8	22,121	1.300	28,760	925
	0.4 - 0.6	24,929	1.211	30,192	971
	0.2 - 0.4	25,585	1.189	30,414	978
	0 - 0.2	25,626	1.187	30,419	978
	Total	**25,626**	**1.187**	**30,419**	**978**
Oxidated Indicated	1 - 9999	105	1.512	159	5
	0.8 - 1.0	116	1.456	170	5
	0.6 - 0.8	143	1.309	188	6
	0.4 - 0.6	163	1.213	198	6
	0.2 - 0.4	183	1.118	205	7
	0 - 0.2	183	1.118	205	7
	Total	**183**	**1.118**	**205**	**7**
Oxidated Inferred	1 - 9999	1,357	1.252	1,698	55
	0.8 - 1.0	1,602	1.199	1,920	62
	0.6 - 0.8	1,787	1.146	2,048	66
	0.4 - 0.6	1,992	1.080	2,152	69
	0.2 - 0.4	2,120	1.034	2,191	70
	0 - 0.2	2,120	1.034	2,191	70
	Total	**2,120**	**1.034**	**2,191**	**70**

Table 21 - Total resources above Cutoff 0.2 g Au/t with classification.



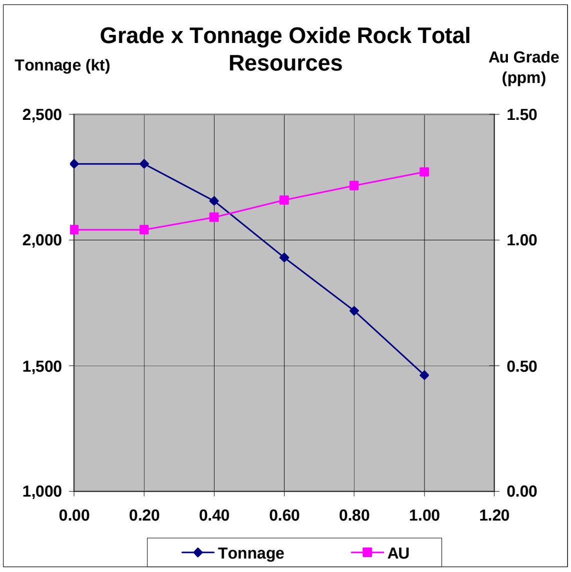


Figure 22 - Grade tonnage curves

17.16 CONCLUSION AND RECOMMENDATIONS

A mineral resource estimation for the Tocantinzinho gold project area has been completed based on the 2007 drillhole data. To determine this, the envelopes representing the zones with reasonable prospect to be mined have been interpreted and constructed in 3D space. The samples contained within those envelopes were selected and ordinary kriging was used to interpolate a block model. The block model was validated by the NCL staff, who concluded that these models are consistent with the available geological data. The figure in the next page summarizes the whole estimation process.

The comparison with the estimate of November 27, 2006 (Pincock, Allen & Holt November 27, 2006) shows a higher tonnage. The reason is that an additional 17 drill holes for a total of 4,359 meters were drilled since the P, A & H report came out.

However, a more refined geostatistical study would probably enhance mine reconciliation and risk analysis. Tools that should be tested are ones like multiple indicator kriging and mathematical tools giving a more rigorous approach for resources classification. Suggestions to obtain a better classification of resources are the use of conditional simulation or error measurement based on kriging variance.

Additional drill holes to improve the resources classification and prepare a good topographic campaign would also improve the evaluation. Channel sampling at the surface would improve the estimation of the oxide zone, which would be critical for the initial stages of mining.

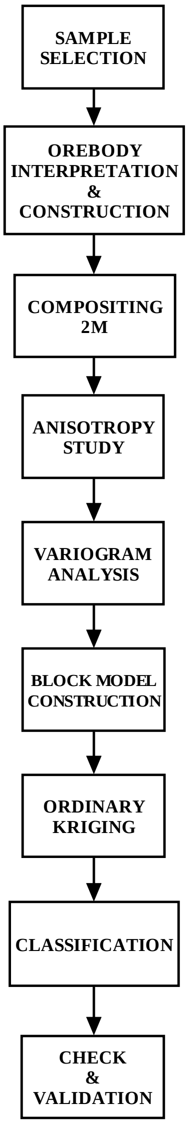


Figure 23 - Flowchart showing the Resources Calculation Methodology.

18. OTHER RELEVANT DATA AND INFORMATION

NCL has carried out a preliminary evaluation of the project, considering only a base case where the gold price would be US$ 550/oz along the life of the mine.The project foresees a single open pit and a Flotation-Cyanidation plant, operating at 2 million tonnes/year rate. All resources where included, disregarding if indicated or inferred. Blue Sky scenarios are discussed, but they were not quantified. The risks are also discussed, based on the sensitivities analysis.

18.1 PROJECT CONCEPT

The project envisaged by Brazauro is a 2 mtpa Open Pit mine / Flotation – Cyanidation plant operation, producing an average of 82 koz of gold. This production rate was decided based on the initial projections of mineable resources, and on the concerns related to power supply to the region. After the realization that the mineable resource is much greater than anticipated and after the information from the state energy agency (Celpa) that enough energy will be available after September 2008, NCL considered to increase the rate of production. Due to time constrains, this work was not carried out. However, in a quick simulation, it was observed that the increase in the NPV of the project, changing from 2 mtpa to 3 mtpa will be over 50%. The gold production will be around 120 koz/year. Brazauro has not yet consulted Celpa about the availability of the extra power necessary for this production increase.

18.1.1 Manpower

The following table summarizes the manpower requirement of the project, contemplating all areas:

Area	**Sector**	**Number of employees**
Plant	Flotation	108
Plant	Cyanidation	52
Plant	Laboratory	16
Plant	Staff	12
Mine	Operators	104
Mine	Maintenance	41
MIne	Grade control	8
Mine	Staff	12
Administration	Security	16
Administration	Admin	6
Administration	Cleaning	6
Administration	Kitchen	12
Administration	Staff	4
Environment	Staff	4
Environment	Helpers	11
Total		**412**

Table 22 - Man power requirement of the Project.

18.1.2 Mine Site Plan

A very preliminary mine site plan was designed, since no topographic information from the surroundings of the deposit was available at an adequate scale. The following information was used:

•Field annotations, observing from ground and from airplane, regions more suitable for the plant, waste dumps and tailing dams

•Army’s topographic map of the region, with curves at each 50 m separation

•DTM image from the Shuttle surveying program, in RGB scale
•Ikonos satellite image, with a resolution of 1 m, but without 3D information

To choose the location of the plant, a flat zone to the southwest of the pit was selected. The reason is that it is closer to the entry point of the project, and avoids the zone disturbed by the garimpeiros. At this stage, NCL does not consider necessary to design a conceptual plant layout, therefore just a square of 3 ha is drawn in figure 24, for the area to erect the Flotation-Cyanidation Plant. The Crusher will be located on the corner nearest to the entrance of the pit.

The location of the waste dumps was chosen trying to avoid the drainage zones and seeking the flatter areas, to SW and South of the pit. They were drawn as close as possible to the pit entrance.

The tailings dams were selected in the valleys near the project. The tailings dam to the east of the pit, called here Tailings Dam south, will be filled initially. The region, called Veados Creek, is a closed valley where little containment will be necessary. The volume supported by this dam will not be sufficient; therefore a second dam will be necessary. The region chosen is much flatter, requiring more earthmoving for the containment of the tailings.

The estimated capacity of the dams and dumps is listed on the table below. A density of 1.7 t/m³ was used to estimate the waste dumps, and 1.32 t/m³ for the tailings dam.

	Area (000 m^2)	**Volume (000 m^3)**	**Tonnage (Kton)**	**Height (m)**
Waste Dump North	724	54,757	59,841	90
Waste Dump South	819	46,727	51,066	90
Total Capacity for Waste	**1,543**	**101,484**	**110,907**	
Taillings Dam North	1,133	19,264	25,429	17
Taillings Dam South	587	9,979	13,172	17
Total Capacity for Tailings	**1,720**	**29,243**	**38,601**	

Table 23 - Estimated capacity of the tailings dams and waste dumps

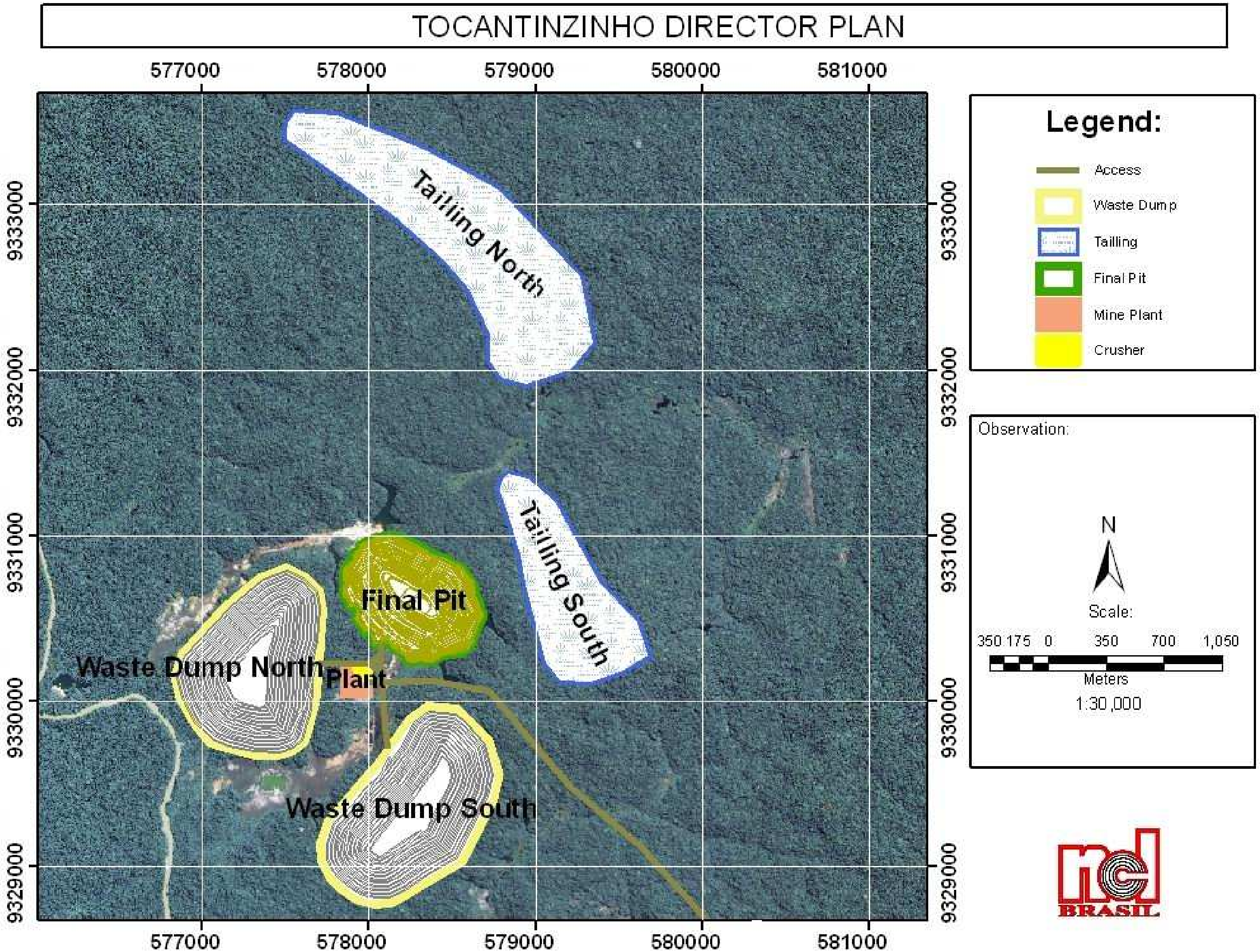


Figure 24 - Mine Site plan of the Tocantinzinho Project

18.2 MINING

The economically interesting mineralization at Tocantinzinho occurs near surface over a strike of around 700 m with a horizontal width of up to 150 m, making it very well suited to extraction by the open pit mining methods considered in this preliminary evaluation. The term “ore” is used in this report for simplicity, representing the mineral resource within the economic envelope and above the chosen cutoff.
Cautionary Statement: This economic assessment is based partially on Inferred Resources, and its accuracy does not match the pre-requisites of a Pre-Feasibility Study, which is the minimum requirement for the conversion of Measured and Indicated Resources into Reserves. This preliminary assessment includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the results of the preliminary assessment will be realized.

18.2.1 Open Pit Optimization

An open-pit optimization analysis was carried out using the mineral resource block model and Whittle Lerchs-Grossman pit optimization software. The analysis was performed on a block model with block dimensions of 10 m x 10 m x 5 m. Economic and technical parameters were applied to the block model to generate a net value model for the optimization. These parameters were applied via a series of calculations on each block in the model to derive its net value based upon the metal grades of that block. The calculation was performed on all ore blocks; however, for the optimization, only blocks with a positive net value were considered as ‘ore’. Sub-economic blocks were considered as waste. For this study, the oxided resources were considered as waste, since its gold content would not be recoverable using the processing plant considered in this report. This aspect should be further studied in the following appraisal of the deposit, therefore being an upside of the project.
Mining dilution was not considered in this study due to the massive shape of the orebody, with little contact of the ore blocks with the country waste. Using the parameters shown in table 24, the break-even cut-off grade was calculated to be 0.55 g/t Au.
The long-term price of gold chosen for the preliminary evaluation base case was US$ 550/Oz. This price reflects Brazauro’s view of the long term price for gold. Operating cost estimates used in preparation of the open pit optimization were based on a steady-state mining scenario in which the mining rate for ore closely matches the milling rate so that no stockpile is created or drawn down. The chosen milling rate for this scenario was 5,500 tonnes per day. The parameters used for optimization are presented in Table 24.

Price	550	US$/oz
Mine Cost	1.2	US$/ton
Process Cost	7.6	US$/ton
Plant capacity	5,500	ktpd
Selling costs	1.704	US$/oz
Process Recovery	93.0%	
Slope Angle	45º	degree

Table 24 - Pit Optimization Parameters

Sensitivity analyses were run by varying the sale price of Au between US$275.00/Oz and US$1,100.00/Oz in increments of US$27.50/Oz. The results of this resource sensitivity analysis are presented in the table below.

Pit	Price	SR	Total	Ore	Au	Au contained	Selling cost	Cost US$/oz
	US$/Oz		kTon	kTon	ppm	g	kUS$	Incremental Costs
1	275	1.46	10,810	4,401	1.669	7,344,869	-11640	264
2	302.5	1.48	14,884	6,005	1.616	9,704,346	-15379	295
3	330	1.53	29,964	11,848	1.471	17,424,780	-27613	324
4	357.5	1.96	89,455	30,218	1.384	41,817,311	-66269	342
5	385	2.16	105,908	33,518	1.388	46,536,038	-73747	371
6	412.5	2.29	117,625	35,702	1.387	49,509,931	-78459	398
7	440	2.40	126,570	37,252	1.384	51,541,731	-81679	424
8	467.5	2.46	132,217	38,216	1.38	52,732,631	-83566	449
9	495	2.56	139,665	39,245	1.378	54,067,760	-85682	473
10	522.5	2.61	144,150	39,918	1.374	54,848,872	-86920	502
11	**550**	**2.66**	**147,964**	**40,408**	**1.372**	**55,425,767**	**-87834**	**534**
12	577.5	2.72	152,475	40,947	1.369	56,054,669	-88831	559
13	605	2.82	159,075	41,687	1.365	56,900,122	-90171	589
14	632.5	2.84	161,770	42,079	1.361	57,276,977	-90768	605
15	660	2.89	164,774	42,384	1.359	57,616,504	-91306	636
16	687.5	2.98	171,067	43,015	1.355	58,292,414	-92377	664
17	715	3.02	173,685	43,247	1.354	58,546,257	-92779	700
18	742.5	3.05	175,907	43,385	1.354	58,729,913	-93070	729
19	770	3.09	178,114	43,593	1.352	58,927,677	-93384	768
20	797.5	3.11	179,971	43,775	1.35	59,092,284	-93645	786
21	825	3.13	180,883	43,827	1.35	59,158,116	-93749	810
22	852.5	3.15	182,595	43,983	1.348	59,297,083	-93969	833
23	880	3.20	186,103	44,279	1.345	59,557,468	-94382	883
24	907.5	3.21	186,784	44,319	1.345	59,601,835	-94452	898
25	935	3.25	189,071	44,496	1.343	59,759,289	-94702	920
26	962.5	3.27	190,253	44,604	1.342	59,842,777	-94834	950
27	1017.5	3.31	192,732	44,769	1.34	59,986,627	-95062	1037
28	1045	3.35	195,441	44,956	1.338	60,143,267	-95310	1050
29	1072.5	3.39	197,565	45,030	1.338	60,245,755	-95473	1067
30	1100	3.40	198,477	45,099	1.337	60,297,578	-95555	1099

Table 25 - Sensitivity of Resource within Optimized Pit Shell to Au Price

For the choice of the pit to be used as final pit, the following graph was used. In the figure 25 it can be noted that for gold prices higher than US$ 550, the incremental cost increases significantly, not justifying the mining of the enlarged pits calculated for higher gold prices. The long term view that the gold price will stay at US$ 550 also influenced this decision.

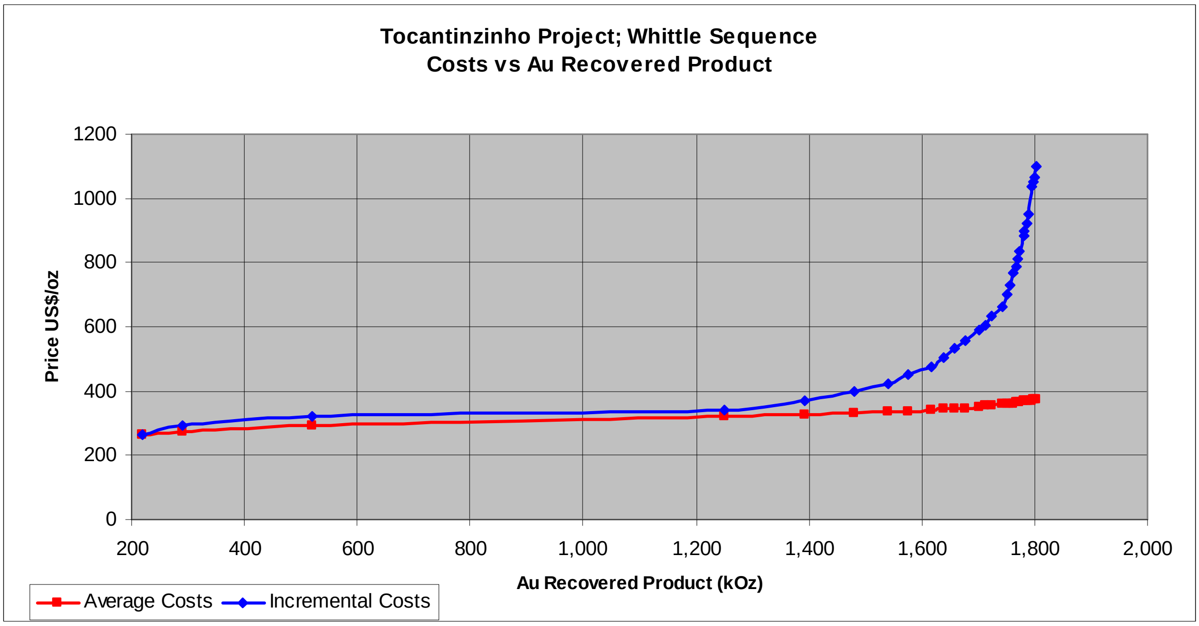


Figure 25 - Costs versus Recovered Product. Tocantinzinho Project

18.2.2 Preliminary Pit Design

The base case open pit optimization at US$550/Oz defined a pit shell that extends 300 m deep from surface with a pit rim diameter of roughly 900 m. The deepest point in the pit shell is in the northern end at an elevation of -170 m RL. A 3D view of the operational pit is given in Figure 26.

Gemcom software was used to modify the chosen pit shell originated from Whittle to create a preliminary engineered open pit design (Figure 26). Assumptions on batter angles and berm intervals were based on NCL's experience of open pits mined in similar rock types and operating conditions. A berm width of 5.8 m, batter angle 75° m at vertical intervals of 10 m was selected, giving a pit slope with an angle slightly smaller than 50° (toe-toe).

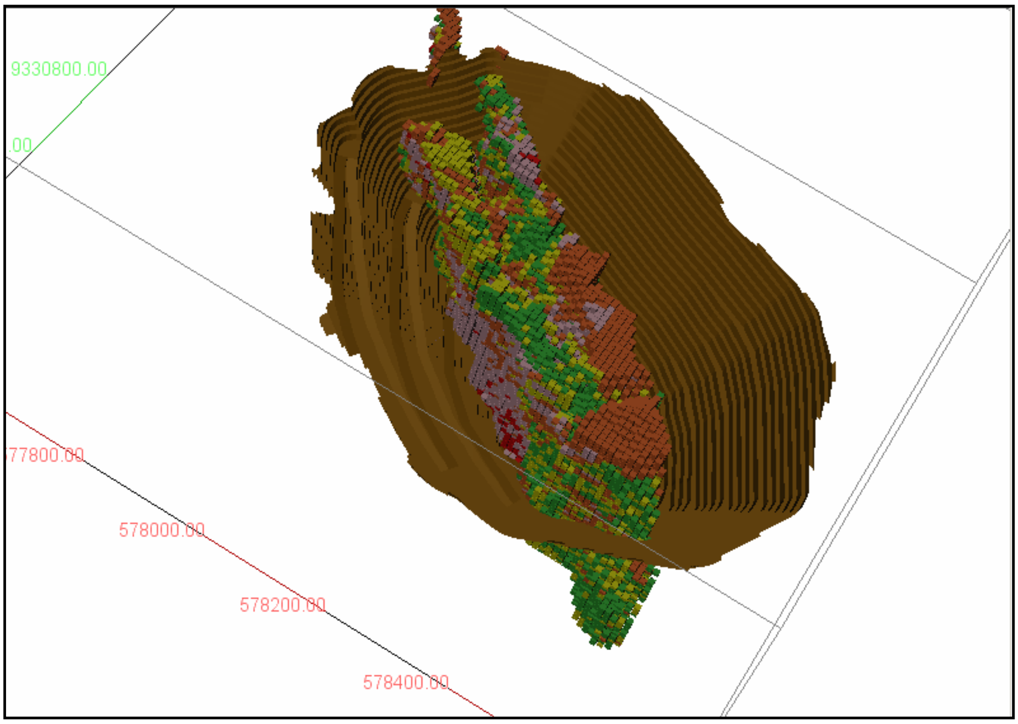


Figure 26 - 3D View of the Operational Pit

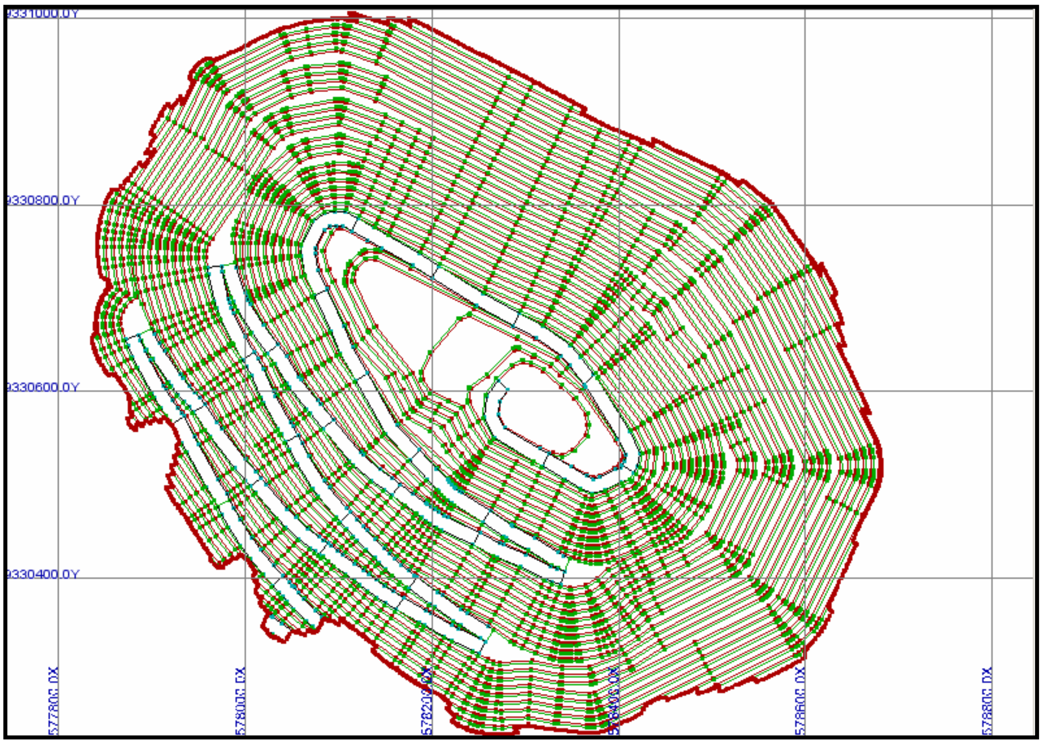


Figure 27 - Plan showing Preliminary Open Pit Design

The main haulage ramp was designed to ascend anti-clockwise and predominantly on the southwest wall, emerging from the pit in the southwest corner to connect with the surface haul roads. The ramp was designed to be 15 m wide on a gradient of 10%. However, given the preliminary scope of this work, NCL preferred to use the pit shell generated by the Whittle software to calculate the mineable resources.

18.2.3 Resources within the economic envelope

The mineral resources within the chosen pit shell and above the 0.55 g/t is presented in Table below.

	Ore ktons	Grade Au g/t	Gold Content koz
Indicated	20,717	1.48	984
Inferred	17,833	1.34	768

Table 26 - Mineral Resources within the Final Pit Shell, above cut off of 0.55 g/t

The totals for waste rock, including oxide resources and fresh rock resources below the cut off are depicted in the table below.

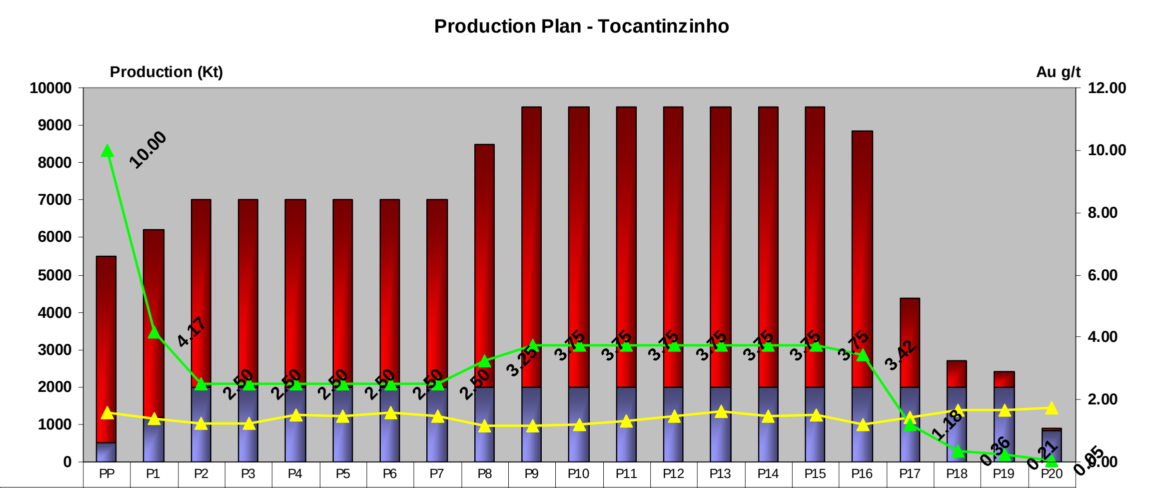
Waste ktons	Stripping ratio	Total Rock Moved ktons
109,387	**2.84**	**147,937**

Table 27 - Waste rock within pit shell

18.2.4 Mining Schedule

The proposed mining production schedule aims to provide mill feed at the rate of 2,000 kTonnes/year, being sufficient to produce 84.0 koz/year of gold at a recovery rate of 93%.
Due to the relatively small plan area of the pit, for the purposes of this preliminary evaluation NCL has assumed four phases of pit development. In the event that further drilling of the

deposit succeeds in discovering additional mineral resources in the adjacent portions of the strike, however, enlargement of the pit would increase the attractiveness of a phased pit development schedule.
The necessity of a relatively high early stripping ratio is demonstrated by plotting the cumulative percentages of ore and waste on a bench-by-bench basis. In the figure below the cumulative stripping ratio is indicated by the green curve, while the grade of the resource Au g/t is given by the yellow curve.
Without pre-stripping of waste, high volumes of waste must be mined concurrently with the start of ore mining. To mitigate the impact of this on the required mining fleet capacity, the schedule is adjusted by bringing forward some waste mining into a 12- month pre-production period. Waste removed during this pre-stripping exercise reduces the peak volume to be moved later. During the production period, the annual Schedule assumes that waste is then mined bench by bench on a just-in-time basis to expose the required tonnage of process feed. The resulting single-phase open pit production Schedule is shown diagrammatically in Figure 28.



	PP	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19	P20
Waste	5000	5003	5000	5000	5000	5000	5000	5000	6500	7500	7500	7500	7500	7500	7500	7500	6843	2361	714	426	39.9
Ore	500	1200	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2001	2000	2000	2000	2000	2000	2000	845.5
SR	10.00	4.17	2.50	2.50	2.50	2.50	2.50	2.50	3.25	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.42	1.18	0.36	0.21	0.05
Au g/t	1.57	1.39	1.24	1.25	1.50	1.45	1.57	1.45	1.15	1.16	1.18	1.31	1.47	1.60	1.47	1.51	1.18	1.44	1.68	1.66	1.7

Figure 28 - Cumulative Stripping Ratio and production plan

The life-of-mine average stripping ratio (W/O) is 2.81:1. The total waste rock to be stored amounts to 109.4 million tonnes. This will be stored in an area south and southwest of the open pit, in two waste dumps: waste dump north and waste dump south. The ore produced during the pre-stripping period would be stocked within waste dump north area that is closer to the plant. During pre-stripping of the open pit area and waste dump preparation, topsoil will be placed around the waste dump form a bund wall, which will act as a barrier to noise during mining and allow this material to be replaced over the waste rock to facilitate revegetation when mining of the open pit has ceased. Around the outside of the bund wall, a diversion channel will be excavated to protect the open pit against flooding during the rain periods.

18.2.5 Mining Method and Equipment

The mining method selected is a conventional drill and blast, truck and shovel operation, mining both ore and waste on 10 m benches. Sampling of ore and waste blast holes will be undertaken for grade control purposes. Mining operations will take place on a 3-shift, 24-hour cycle 360 days per year.

It is envisaged that a single blast-hole drill and two principal excavators will be required to achieve the production schedule. A front-end loader will also be available as back-up for the excavator and for clean-up and materials handling around the process plant. A bulldozer will clean the pit floor prior to drilling. A water truck and motor grader will maintain the haul roads.

The fleet identified for the mining of the Tocantinzinho open pit has been based on NCL's assessment of the production schedule, the nature of the material being mined, and estimates of productivity which NCL accepts as reasonable. For the purposes of this preliminary assessment, NCL has assumed that an owner-operator strategy is followed, but recognizes that contractor mining and/or some degree of vendor maintenance for the equipment may prove more attractive. The identified fleet for the base case model is summarized as shown in the following table.

Fleet Description	Type	Number Required
DRILLING	6 1/2" T4	1
LOADER	CAT 385	2
HAULING	Volvo A35	7
Auxiliary Fleet		
Support Loader	CAT 980	1
Bulldozer	D8	2
Wheeldozer	824	2
Grader	14H	1
Water - Truck	30m3	1
Excavator	CAT 416 - 1 .5 yd3	1
Fuel Truck		1
Lubrification Truck		1
Service - Truck		1
Munck- Truck		1
Flatbed truck		1
Manip. Tyre (CAT 950G with catcher)		1
Service - Pickups		12
Light Plants		4

Table 28 - Mining Fleet Requirements

Based on a the NCL´s experience with similar operations in the Amazon region, an articulated 35 tons mining truck appeared to provide an economic advantage for operation in this weather conditions. However, during subsequent stages of project development, the possibility of alternative haul units should be given more consideration,.

Despite the increasing haul distance and cycle time as the open pit gets deeper each year, the reducing waste removal requirement results in a net decrease in the trucking capacity necessary. Therefore not all the trucks will need to be replaced as they wear out. In year 10 of the operation, the expense for a large replacement of equipment was incorporated in the cash flow, as ongoing capex.

In addition to the above, a mine vehicle workshop would be required. This building would be sited close to the process plant, to facilitate communications and access. Its costs is included in the plant Capex. The explosives depot would be sited to the east, within the mine perimeter but isolated from other infrastructure.

18.2.6 Mining Operational Cost

For this exercise, NCL assumed a single cost per tonne mined average for the life of mine, considering the transport distance to the crusher and to the waste dump as a single average for the whole life of mine. It was adopted a bench mark cost of mines operating in the Amazon region from which NCL possess mine cost information. The cost per tonne mined chosen is 1.2 US$/tonne. The break down of this cost is the table below:

MINE OPERATIONAL COSTS	ROCK
	US$/tonne
DRILLING	0.12
BLASTING	0.25
LOADING	0.14
HAULING	0.30
ANCILLARY EQUIPMENT	0.19
TRENCHER	0.02
VEHICLES	0.02
LABOR (OTHER)	0.11
SUPORT	0.03
OTHER COSTS	0.04
TOTAL	1.20

Table 29 - Mining Operational Costs

18.3 PROCESS

The details in respect to the metallurgical tests performed and the justification of the process route chosen can be seen in the chapter 16. In the present section, details are given in respect to the capital expenses and the operational cost used in the cash flow projection. These estimates have been prepared by the consultant Luis Bernal.

18.3.1 Plant Capital Expenditure

For this estimate, costs from other operations running a similar route were used. For confidentiality reasons, these operations are not disclosed here. Factors were used to escalate the expenses to the production envisaged. To account for the uncertainties of this escalation, an extra contingency of 10% has been incorporated on plant capital costs, totaling 21% contingency on these costs, if considering also the 10% applied on all capital costs in the economic model. The major items of expense are depicted in the following table:

Summary per areas	Cost US$ 000
Direct Costs	
Primary Crusher	1,670
Conveyor Belts	3,413
SAG mill	10,471
Flotation	3,986
Cyanidation plant	4,629
Infrastructure Plant	3,297
Total direct Cost	27,466
Indirect Costs	
Construction contractor	3,708
Insurance and transportation	1,854
Spares	549
EPCM	4,463
Training and commissioning	744
Total Indirect Cost	11,318
Contingency (10% Direct & Indirect costs)	3,878
Total Capex: Cyanidation+flotation plant	42,663

Table 30 - Process Capital Costs

18.3.2 Process Operating Costs

In the same manner, operating costs were escalated from similar operations, and adjusted to the manpower foreseen (160 operators) and to the power cost. Power costs were provided by the official Power Agency in the state (CELPA), and all the seasonal variations were taken into account.
These major items are depicted in the following table:

Items	Cost US$	Unit
Power	0.06	US$/kwh
Mill Balls	750	US$/t
Cyanide	1,700	US$/t
Flotation reagents	2,000	US$/t
Water	0.2	US$/m3

Table 31 - Major components of the operational costs

Items	US$/t
Primary Crusher	0.81
SAG mill and balls	3.64
Flotation rougher-cleaner-scavenger	0.83
Filtration & tailings	0.25
Cyanidation	1.94
Total	7.46

Table 32 - Processing operational costs

18.4 ENVIRONMENTAL AND SOCIAL ASPECTS

18.4.1 Enviromental Conditions

Local physiography consists of somewhat rugged topography forming hills and valleys. Serra Leste is the highest point of land on the Tocantinzinho property and is about 50 meters above the surrounding drainages. Vegetation is typical of that found in a tropical jungle environment of the Amazon basin. The only areas not covered by jungle are those worked by the garimpeiros and the drainages filled by either tailings or swamps.
The local climate has two seasons, the rainy season from January to June, and the dry season from July to December. This climate is characteristic of much of the state of Pará. The average daytime temperature in the project area is 26.1º C. The temperatures don’t vary significantly with maximum of 33°C and a minimum of 24.5°C. Relative humidity averages 75% with an annual range from 70% to 80%.Rainfall in the project area is about 1,370 mm per year.
The project area is in the Tocantinzinho basin, which empties into Jamanxim basin. That basin empties into the Tapajós basin, which empties into the Amazon basin. The rivers near the area present sandy beds and are not very deep, making navigation difficult.

18.4.2 Social Parameters

There are no permanent inhabitants within the boundaries of Brazauro’s properties. However there are currently, about six to eight teams of local garimpeiros operating in some areas of

Brazauro properties. The nearest town to Tocantinzinho with social services is Itaituba that has a population of approximately 96,000 inhabitants. Banking, postal service, health services and communications, as well as education centers, and regular air service to other major cities, such as Belem, Manaus and Cuiabá, etc. are available at Itaituba. Labor required for Project development and operations will be brought into the Project from Itaituba and other Pará State cities.

There may be sufficient surface rights within the Brazauro properties for infrastructure requirements, including an extended airstrip. Brazauro is investigating the possibility of connecting the Project area by road to the nearby logging road system, a distance of about 12 kilometers. This road would allow access via the Mamoal garimpo to the main N-S road system.

Water for Tocantinzinho is be abundant, with the Tocantins River within 1,000 meters. No electric power is available within the Project's vicinity.

Fuel and other major supplies are currently brought into the Tocantinzinho area by water ways. People, food supplies and other items are brought into the area by small airplanes from Itaituba.

18.4.3 Brazilian Permitting Process

When a Class II mineral extraction project (as defined in the Mining Code) is presented for development, a multidisciplinary technical review team is appointed by the State Council for Environmental Matters (CEPRAM) to review the project. This team sets the Terms of Reference for the environmental impact assessment (EIA) and the RIMA (Relatório de Impacto Ambiental). A RIMA is a document that summarizes the full impact assessment for review by the public. The permitting process is as follows:

- The project EIA, has to be submitted to the Pará State Environmental Agency (CRA);
- CRA's review of the EIA/RIMA is expected to take place during the date defined on the report. Since no specific time limit is attached to this review, the completion date for this process is unknown;
- Once the review is complete, the government announces the publication in the official Gazette, initiating a 45-day public review period;
- During this review period, the company also makes a presentation, in a public forum, at which time public comments may be received;
- Depending upon the results of the review, and taking into consideration public comments, the project will be granted (or denied) a Licença Prévia (Preliminary License) to proceed with development.
- Following issuance of the Preliminary License, the proponent can proceed with application for a Construction / Implementation License which is expected to take 60 to 90 days to process;
- An Operational License is applied after construction and requires review and renewal after three years.

18.4.4 International Financing

If international financing is sought, there are a number of updates that need to be made to the environmental and social components of the project. An update of the environmental and social impact assessment (ESIA) to international standards will be necessary on the feasibility design.

In particular, current water quality, hydrology and meteorology data need to be collected. Waste rock and tailings geochemical characterization and water quality modeling need to be completed. A public consultation and disclosure plan will need to be prepared as part of the

ESIA. Detailed environmental and social action plans will need to be developed prior to construction.

18.4.5 Social and Environmental Contribution

The Tocantinzinho Project will be important to development of the region, giving social support and necessary infrastructure for neighborhood, generating 412 direct jobs and 1200 indirect jobs.

Besides the investments made to the implementation phases, Brazauro also has a reclamation plan to the area. The total investment to mine closure reaches 3,2 million dollars and includes demolition and remobilization of mine infrastructure and area reforestation.

Acid drainage treatment it not expected to be a problem because of high dilution, due to rainfall precipitation, and the low content in sulphide of the granite hosting the mineralization.

This project also has the concern of sustainable development, dealing with economical and social developments, respecting environment by giving a quality of life to local population.

18.5 INFRASTRUCTURE

As commented in chapter 5, the region requires substantial investments in infrastructure, representing 33% of the capital expenditures. Considering the support that the state government has given to other ventures, it is possible that some of this investment will be assumed by the government. Nevertheless, for this study, Brazauro will be assuming the whole infrastructure expenditure.

18.5.1 Climatic Regime

The region has two well defined seasons:

- A dry season, with little precipitation (July-December)
- A wet season, with heavy rains (January-June)

The annual precipitation varies from 1.355 to 2.839 mm To reduce the interferences of the climate in the construction stage of the facilities, most of the activities (deforestation, roads construction, infrastructure, basic sanitation, civil construction, power transmission line, electric substation, dams and others necessary), will be conducted during the dry season.

18.5.2 Access

The project is located about 108 Km from the town of Moraes de Almeida, in the Cuiabá-Santarém highway. Transport to the Tocantinzinho Project can be done as follows:

•River transport, until the port of Santarém. There is a good airport in Santarém, as well;

•Road transport. From Santarém to Moraes Moreira, 470 km along the highway Cuiabá-Santarém, being 214 km asphalt.

From the town of Moraes de Almeida to the project, the Transgarimpeira road will be used for 36 Km. This road is not paved. A barge, with capacity to transport 90 tonnes, is used to cross the Jamanxim River.

The Internal roads to the project: are estimated as about 10 Km in extension, having an average width of15 meters.

Total extension of roads to be constructed or improved is 82 km. From those, 25 km are new roads, including 10 km of internal roads.

The figure and the table in the next page give the details of the access construction to the mine site.

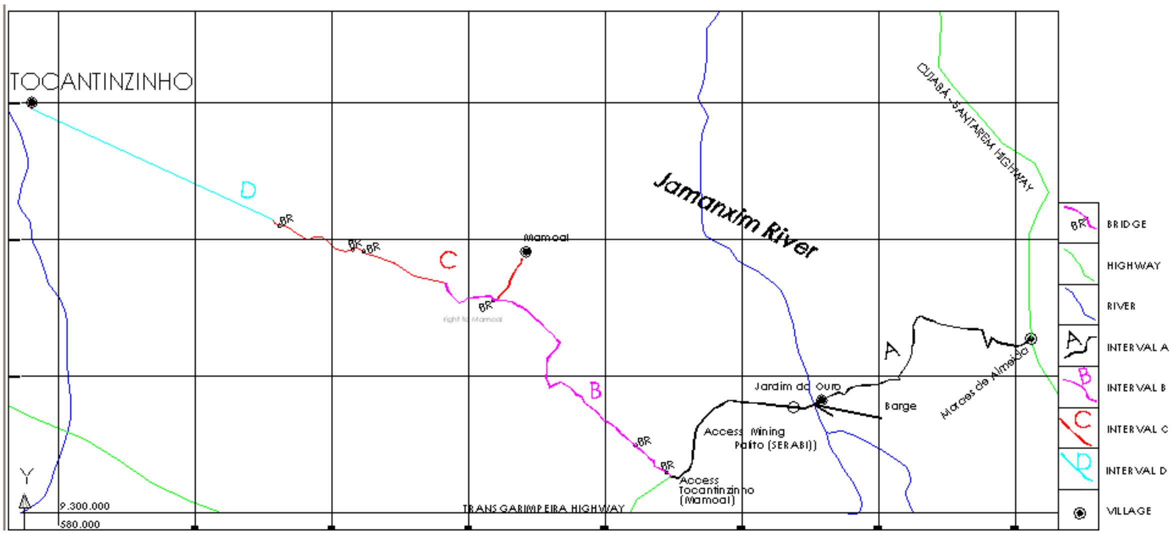


Figure 29 - Map of the access road to be repaired /constructed

Interval	From - to	Distance	Details
A	Moraes de Almeida to vicinal road acess, using Transgarimpeira road	36 km	Only small repairs
B	Transgarimpeira road- Inácio Farm	27 Km	Road - Current width - 4m, to enlarge to 6m,reconstruction of 2 bridges with about 25 meters each and 2 bridges with about 20 m each, low forest
C	Inácio Farm-end of logging road	30 Km	Road - Current width - 4m, to enlarge to 6m,reconstruction of 4 bridges with about 15 meters each, dense forest
D	End of logging road - Project Site	15 Km	New road of 15 km to be constructed. Dense forest. Two bridges of 20 m extension each will be required

Table 33 - Access construction details

18.5.3 Earthmoving

The earthmoving necessary is the leveling of an area in the approximated dimension of 300m x 200m, for the erection of the project's plant. Dykes for deviation of rain water are also considered, for the protection of the pit area.

18.5.4 Dams: Tailing/Water Containment

Two dams will be constructed for the tailings dam contention, as well as a number of smaller dams designed for fines collection, water reservoir and water deviation from the pit area. No waterproofing is projected in the tailings dam, assuming that the tailings will be non-pollutant.

18.5.5 Basic Sanitation

This item includes reception, pumping, treatment, storage and distribution of industrial and drinkable water and sanitary facilities with sewer treatment. The details are listed in the table 35.

18.5.6 Power supply

At Brazauro´s request, CELPA, the state agency for power generation and distribution of the Pará State, has studied the technical feasibility of delivering the necessary power to the mine. The information given is that after September 2008 the new energy system of Curuá-Buriti will start operating at tension of 138 Kv. They suggested the construction of a line starting from this system in the substation of Novo Progresso, at the tension of 138 kv, extending for 201 km. CELPA presented a quotation for this construction, totaling US$ 16.88 million, being US$ 16.6 million of Brazauro´s responsibility and US$ 0.27 million of CELPA´s responsibility.

Besides the power line, the Capex for power includes substations to reduce the tension to 13.8 kv, and internal net of distribution at 13.8 kv.

18.5.7 Other Works

Other works listed in the infrastructure Capex are:

- Explosive depot. Dimensions 10m X 10m
- Airstrip enlargement. Dimensions:: 30m X 1.000m.
- Edifications: Lodgings, restaurant, security gates, offices, and general constructions.

18.5.8 Logistics

The table below lists the sources anticipated for the necessary construction material:

LATERITE	To cover the roads, foundations and similar works. Originated from deposits in the region, within the respective legal licenses. Transport to the area will be by trucks.
SAND	Originated from deposits inside areas of the project. It is necessary the wash of the material for separation of organic matter. The transport to the area will be by roads in trucks.
PEBBLE	Originated from deposits inside areas of the project. It is necessary the wash of the material for separation of organic matter. The transport to the area will be using in trucks.
CEMENT	The supply of cement is foreseen to be done by the factory in Itaituba. Transport to the area will be by roads in vehicles with capacity of 30 tonnes each.
STEEL	Steel can be supplied in bars or cut and bent by local steel industries in the south or in the southeast of the country. It will be transported by trucks from Santarém.
Timber	The necessary timber will be acquired directly from local suppliers

Table 34 - Source foreseen for the necessary material of the construction.

Item	DESCRIPTION	TOCANTINZINHO PROJECT - Worksheet of Quantity & Prices			
		Quantity	Unity	Unitary Price	Total Price (R$)
	Acess Roads				**11,738,000.00**
	1º. Interval - about 27 Km- low forest- width - 6 meters	27.00	km	114,000.00	3,078,000.00
	2º. Interval - about 30 km - high forest- width - 6 meters	30.00	km	120,000.00	3,600,000.00
	3º. Interval - about 15 km - original forest - width = 6 metros	15.00	km	138,000.00	2,070,000.00
	Road inside area from project- about 10 km - width = 15 metros	10.00	km	299,000.00	2,990,000.00
	Bridge Construction				**5,730,000.00**
	Bridge with 30 meters	1.00	un	720,000.00	720,000.00
	Bridge with 25 meters	2.00	un	625,000.00	1,250,000.00
	Bridge with 20 meters	4.00	un	520,000.00	2,080,000.00
	Bridge with 15 meters	4.00	un	420,000.00	1,680,000.00
	Earth Moving				**442,513.56**
	Deforestation	20,000.00	m2	1.50	30,000.00
	Cut and retreat of the trees	400.00	un	52.82	21,128.00
	Excavation, loading and hauling of superficial layer of soil , mdt until 500m	6,000.00	m3	4.72	28,320.00
	Excavation, loading, hauling, unloading and scatter of the better quality material	10,000.00	m3	9.02	90,200.00
	Embankment compacting to 95% the proctor normal - earthwork	10,000.00	m3	1.79	17,900.00
	Paving				
	Fundation				
	Regularization of fundation - earthwork	20,000.00	m2	1.20	24,000.00
	Primary revestment				
	Primary revetment with gravel - earthwork, mdt until 1.000m	6,000.00	m3	17.61	105,660.00
	Drainage and superficial works				
	Cut protection ditch	300.00	m	30.16	9,048.00
	Embankment protection ditch	1,000.00	m	32.45	32,450.00
	Concret gutter	400.00	m	42.21	16,884.00
	Tubular simple gutter of concrete ca2 - bstc ø 1000mm	200.00	m	293.73	58,746.00
	Normal mouth for tubular simple gutter of concrete bstc ø 1000mm	4.00	un	1,244.39	4,977.56
	Gardening				
	Protection of slopes with grass	1,000.00	m2	3.20	3,200.00
	Explosive Depot				**88,158.50**
	Deforestation	400.00	m2	1.50	600.00
	Cutting and removal of trees	5.00	un	52.82	264.10
	Excavation, loading and hauling of superficial layer of soil , MDT until 500m	120.00	m3	4.72	566.40
	Excavation, loading, hauling, unloading and scatter of the better quality material, MDT of 400- 600m	1,200.00	m3	6.73	8,076.00
	drainage and superficial works				
	embankment protection ditch	80.00	m	32.45	2,596.00
	Gardening				
	Protection of slopes with grass	330.00	m2	3.20	1,056.00
	civil construction	30.00	m2	2,500.00	75,000.00
	Airstrip				**411,849.00**
	Deforestation	28,000.00	m2	1.50	42,000.00
	Cut and retreat of the trees	56.00	un	52.82	2,957.92
	Excavation, loading and hauling of superficial layer of soil , MDT until 500m	8,400.00	m3	4.72	39,648.00
	Excavation of ditch in better quality material	1,236.00	m3	12.80	15,820.80
	Excavation, loading, hauling, unloading and scatter of the better quality material, MDT of 400- 600m	8,400.00	m3	6.73	56,532.00
	PAVING				
	FOUNDATION				
	Regularization of foundation - Earthwork	30,000.00	m2	1.20	36,000.00
	PRIMARY REVESTMENT				
	Primary revestment with gravel - Earthwork, MDT until 1.000m	9,000.00	m2	17.61	158,490.00
	Drainage and superficial works				
	Cut protection ditch	300.00	m	30.16	9,048.00
	embankment protection ditch	300.00	m	32.45	9,735.00
	Concret gutter	200.00	m	42.21	8,442.00
	Tubular Simple gutter of Concrete CA2 - BSTC Ø 1000mm	50.00	m	293.73	14,686.50
	Normal mouth for tubular simple gutter of concrete BSTC Ø 1000mm	2.00	un	1,244.39	2,488.78
	GARDENING				
	Protection of slopes with grass	5,000.00	m2	3.20	16,000.00

Table 35 - Worksheet of quantities and prices I

Dams: Tailing /Water containment				**3,749,985.04**
Deforestation	36,000.00	m2	1.50	54,000.00
Cut and retreat of the trees	72.00	un	52.82	3,803.04
Excavation, loading and hauling of superficial layer of soil , mdt until 500m	14,400.00	m3	4.72	67,968.00
Preparation and treatment of the foundation(soil)	12,000.00	m2	2.50	30,000.00
Regularização of the land (compacting of the land to amount of the vertical filter)	10,000.00	m3	25.00	250,000.00
Earthwork				
Excavation, loading, transport, unloading and scatter of material	3,600.00	m3	5.00	18,000.00
Excavation, loading, hauling, unloading and scatter of the better quality material	72,000.00	m3	6.73	484,560.00
Embankment compacting to 95% do proctor normal	72,000.00	m3	1.79	128,880.00
Scatter and to increase density of the sandfilter	8,000.00	m3	30.00	240,000.00
Scatter and compacting of transition	2,400.00	m3	2.80	6,720.00
Drainage and superficial works				
Supply and installation of the blanket without poliester, density of 300 g/m², width of 3,0 mm	2,000.00	m2	5.00	10,000.00
Supply and installation of the pvc impermeable	1,500.00	m2	2.50	3,750.00
blanket , width of 0,6 mm				
Sistem of drenage of the rain	400.00	m3	250.00	100,000.00
Supply, scatter and compacting crushedrock 1 and crushedrock 2	1.00	verba	50,000.00	50,000.00
Supply and installation of piping and special pieces				
Contentions works	3,200.00	m3	150.00	480,000.00
Wall protection	2,000.00	m3	200.00	400,000.00
Wall protection (rip-rap)	4,400.00	m2		136,576.00
Structure of concrete	120,000.00	kg	5.36	643,200.00
Steel	1,700.00	m3		642,528.00
Water/Sewage				**766,000.00**
Reception of water (civil works,equipments)	1.00	budget	15,000.00	15,000.00
Pumping of water (civil works,equipments)	1.00	budget	40,000.00	40,000.00
Pumping water until center of the project	3,000.00	m	65.00	195,000.00
Station of treatment of water, flow 30m3/h	1.00	budget	160,000.00	160,000.00
Station of treatment of sewage, for 500 persons	1.00	budget	220,000.00	220,000.00
Reservoir for potable water, capacity 5000 L	1.00	budget	22,000.00	22,000.00
Reservoir for industrial water, capacity 20.000 L	1.00	budget	60,000.00	60,000.00
Distribution of drinkable water and industrial water	1.00	budget	22,000.00	22,000.00
Facilities of sewer system	1.00	budget	32,000.00	32,000.00
Edifications				**1,652,700.00**
Administrative office	800.00	m2	350.00	280,000.00
Lodgings for superior level and medium level	200.00	m2	350.00	70,000.00
Lodgings for basic level	650.00	m2	350.00	227,500.00
Leisure area	300.00	m2	300.00	90,000.00
Laundry	50.00	m2	400.00	20,000.00
Sanitariums and dressing rooms	80.00	m2	400.00	32,000.00
Chemical sanitariums - 6 units	6.00	un	7,200.00	43,200.00
Kitchen and dining halls				230,000.00
Workshop	200.00	m2	250.00	50,000.00
Fuel reservoir				110,000.00
Storerooms - 2 hangars	600.00	m2	700.00	420,000.00
Laboratory	200.00	m2	400.00	80,000.00
Electric Power				**39,897,378.00**
Line of Transmission in 138 kv, with about 201 km		Budget		33,228,223.00
Substation of 138 kv - 13,8 kv, potency same to 10.000 KVA				6,000,000.00
Substation	1.00	un	5,000,000.00	5,000,000.00
Others	1.00	budget	1,000,000.00	1,000,000.00
Substations of 13,8 kv - 440v - 220v - 127v, total potency same to 7.500 KVA				621,875.00
Potency transformer				402,000.00
Others	1.00	budget	95,500.00	95,500.00
Services	1.00	budget	124,375.00	124,375.00
Distribution nets in 13,8 kv, with about 2 km				47,280.00
Post (11m x 300 kgf)	24.00	un	520.00	12,480.00
Cabbles 4/0	6.00	km	4,000.00	24,000.00
Insulating, acessory	1.00	budget	2,800.00	2,800.00
Equipments	1.00	budget	8,000.00	8,000.00
GRAND TOTAL (R$)				**64,476,584.10**

Table 36 - Worksheet of quantities and prices 2

18.6 PROJECT ECONOMICS

18.6.1 Assumptions used

Valuation Parameters: Tocantinzinho was valued with projected cash flows being discounted at a discount rate of 5% in nominal terms. A fixed Brazilian exchange rate of R$ 2 / 1 US$ was used.

Financing: For project evaluation purposes, no financing has been considered. Nonetheless, for this size of project, it is possible to use the credit lines of BNDES, the Brazilian development bank, which has long-term credit facilities for projects in general, available in local currency (Reais) and also indexed to a currency basket. More attractive conditions may be available for a project in the Amazon region.

Gold Price: For pit optimization and subsequent cash flow projection a gold price of US$ 550/oz was used.

Sunk Costs: The current exercise considers all the expenses incurred with the project, such as the acquisition of the property and exploration directly linked to the deposit. These values where used to reduce the taxable profit, since the Brazilian law allows the deduction of the mine depletion.

Royalties: Two royalties have been included in the valuation:
•The state royalty of 1%, which is the rate applicable to gold, on sales.
•The NSR royalty of 3.5% at gold prices over US$500 per ounce, payable to Alan Carter and Dennis Moore, in respect of production from the license area numbered 850.300/03 under the Carter-Moore agreement. This license area covers approximately one-half (the western half) of the deposit. The Carter-Moore agreement requires payment of a royalty on the licenses acquired under that agreement. Since the application for the license subject to the Carter-Moore agreement covering the eastern half of the deposit will not be successful due to the presence of a prior owner with mineral rights to that area (being Mineracao Cachambix Ltda., now owned by Brazauro) Brazauro has advised NCL that the 3.5% NSR is not payable on the eastern half of the deposit. Based on that, the royalty owed to Carter and Moore is assumed in this assessment as 50% of the original value, or a 1.75% NSR.

In this assessment, the land owner royalty has not been included because the land is public, no legal owner exists to claim this right. For information, it represents 50% of the state royalty, or 0.50% of the revenue.

18.6.2 Taxation Issues

The project was evaluated on the assumption that the available tax incentives will be granted to the project. These incentives are applicable because the project is situated in the Northern region of Brazil, and it is considered of priority interest due to its contribution to regional development. Tax incentives are in the following form:

Tax Reduction: A project considered to be of priority interest is entitled to a reduction of 75% in the effective Income Tax rate. According to resolution 31, from ADA (Agency for the Development of Amazon), this rate could be used for 10 years after the start up of the project, if approved up to 2013. Since this resolution is an extension of the previous limit of the tax incentive, previously finishing in 2013, Brazauro assumes that this benefit will be renewed, therefore the incentive was applied up to the end of the LOM. Considering that the full Income tax is 25% of the taxable profit, a rate of 6.25% was used for the whole period.
Reinvestment Tax Incentive: A reinvestment tax incentive is also granted and deductible from the net income tax due, subject, however to an equivalent contribution from the project, to fund part of the reinvestments. This incentive was not used in the cash flow of the project, as a conservative measure.
Tax Losses Compensation: Tax losses are carried forward and may be compensated for utilizing up to 30% of the profits generated each year. This compensation was incorporated in the project's cash flow.

18.6.3 Project Cash Flow in Nominal Terms

Production Summary	Years	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Ore Mining	kTon	200	300	1200	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2001	2000	2000	2000	2000	2000	2000	845.5	**38,578**
ROM Grade	ppm	1.57	1.57	1.39	1.24	1.25	1.50	1.45	1.57	1.45	1.15	1.16	1.18	1.31	1.47	1.60	1.47	1.51	1.18	1.44	1.68	1.66	1.74	**1.41**
Waste Mining	kTon	2000	3,000	5,003	5,000	5,000	5,000	5,000	5,000	5,000	6,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	6,843	2,361	714	426	40	**109,387**
Gold contained	Oz	10,118	15,178	53,587	79,719	80,199	96,298	93,508	101,201	93,082	74,140	74,618	76,078	84,467	94,538	103,118	94,657	96,973	75,832	92,449	107,777	106,919	47,348	**1,704,457**
Ore Milled	kTon			1700	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2001	2000	2000	2000	2000	2000	2000	846	**38,546**
Grade Milled	ppm			1.44	1.24	1.25	1.50	1.45	1.57	1.45	1.15	1.16	1.18	1.31	1.47	1.60	1.47	1.51	1.18	1.44	1.68	1.66	1.74	**1.41**
Gold recovered	Oz			71,894	72,656	73,093	87,766	85,223	92,235	84,835	67,571	68,007	69,337	76,983	86,162	93,982	86,271	88,382	69,113	84,258	98,228	97,446	43,153	**1,553,442**
Revenue	kUS$			**39,542**	**39,961**	**40,201**	**48,271**	**46,873**	**50,729**	**46,659**	**37,164**	**37,404**	**38,135**	**42,341**	**47,389**	**51,690**	**47,449**	**48,610**	**38,012**	**46,342**	**54,025**	**53,595**	**23,734**	**878,127**
Less transport/refine US$10/oz	kUS$			719	727	731	878	852	922	848	676	680	693	770	862	940	863	884	691	843	982	974	432	**15,966**
Less 1% State Royalties	kUS$			395	400	402	483	469	507	467	372	374	381	423	474	517	474	486	380	463	540	536	237	**8,781**
Net Smelter Return	kUS$			**38,427**	**38,835**	**39,068**	**46,911**	**45,552**	**49,300**	**45,344**	**36,117**	**36,350**	**37,061**	**41,148**	**46,054**	**50,233**	**46,112**	**47,240**	**36,941**	**45,036**	**52,503**	**52,085**	**23,065**	**853,380**
Less NSR Royalties	kUS$			692	699	704	845	820	888	817	650	655	667	741	829	905	830	851	665	811	945	938	415	**15,367**
Net return	kUS$			**37,735**	**38,135**	**38,365**	**46,066**	**44,731**	**48,412**	**44,528**	**35,466**	**35,695**	**36,393**	**40,407**	**45,224**	**49,329**	**45,281**	**46,389**	**36,276**	**44,225**	**51,557**	**51,147**	**22,650**	**838,013**
Operating Costs																								
Mine	kUS$			7,442	8,399	8,399	8,400	8,400	8,399	8,399	10,199	11,399	11,399	11,399	11,399	11,400	11,399	11,399	10,611	5,232	3,257	2,912	1,062	**170,907**
Plant	kUS$			12,691	14,931	14,929	14,931	14,931	14,931	14,931	14,931	14,931	14,931	14,931	14,931	14,937	14,932	14,931	14,931	14,931	14,931	14,931	6,312	**287,764**
G&A	kUS$			3,400	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,002	4,000	4,000	4,000	4,000	4,000	4,000	1,691	**77,093**
Environment	kUS$			1,020	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	507	**23,128**
Cash Operating Costs	kUS$			**24,554**	**28,530**	**28,528**	**28,530**	**28,530**	**28,530**	**28,530**	**30,330**	**31,530**	**31,530**	**31,530**	**31,530**	**31,539**	**31,531**	**31,531**	**30,741**	**25,363**	**23,388**	**23,042**	**9,573**	**558,891**
Operating Margin	kUS$			**13,182**	**9,605**	**9,837**	**17,536**	**16,201**	**19,882**	**15,998**	**5,136**	**4,165**	**4,863**	**8,876**	**13,695**	**17,790**	**13,750**	**14,858**	**5,534**	**18,862**	**28,170**	**28,105**	**13,077**	**279,122**
Capital Costs																								
Mine	kUS$	**13,815**	**6,116**	**360**	**-**	**-**	**-**	**-**	**-**	**-**	**10,047**	**2,007**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**32,345**
Pre-Production	kUS$	3,168	4752																					**7,919**
Mine Equipment	kUS$	10,148	864	360	-	-	-	-	-	-	10,047	2,007	-	-	-	-	-	-	-	-	-	-	-	**23,425**
Mine Infrastructure	kUS$	500	500																					**1,000**
Plant	kUS$	**26,373**	**17,065**	**-**	**-**	**-**	**-**	**-**	**475**	**-**	**-**	**-**	**-**	**475**	**-**	**-**	**-**	**-**	**475**	**-**	**-**	**-**	**-**	**44,863**
Primary Crusher	kUS$	1,002	668						100					100					100					**1,970**
Conveyor Belts	kUS$	2,048	1,365						75					75					75					**3,638**
SAG mill	kUS$	6,283	4,189						100					100					100					**10,771**
Flotation	kUS$	2,391	1,594						100					100					100					**4,286**
Cyanidation plant	kUS$	2,777	1,852						100					100					100					**4,929**
Infrastructure Plant	kUS$	1,978	1,319																					**3,297**
Construction contractor	kUS$	2,225	1,483																					**3,708**
Insurance and transportation	kUS$	1,112	742																					**1,854**
Spares	kUS$	330	220																					**549**
EPCM	kUS$	2,678	1,785																					**4,463**
Training and commissioning	kUS$	446	298																					**744**
Contingency Plant	kUS$	3,103	1,551																					**4,654**
Infrastructure	kUS$	**19,040**	**12,993**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**32,032**
Acess Roads	kUS$	4,695	1,174																					**5,869**
Bridge Construction	kUS$	2,292	573																					**2,865**
Earth Moving	kUS$	221																						**221**
Explosive Depot	kUS$		44																					**44**
Dams: Tailing /Water containment	kUS$	1,500	375																					**1,875**
Water/Sewage	kUS$	192	192																					**383**
Edifications	kUS$	165	661																					**826**
Electric Power	kUS$	9,974	9,974																					**19,949**
Contingency 10%	kUS$	5,923	3,617	36	-	-	-	-	48	-	1,005	201	-	48	-	-	-	-	48	-	-	-	-	**10,924**
Total Capital Costs	**kUS$**	**65,151**	**39,791**	**396**	**-**	**-**	**-**	**-**	**523**	**-**	**11,052**	**2,207**	**-**	**523**	**-**	**-**	**-**	**-**	**523**	**-**	**-**	**-**	**-**	**120,164**
Mine Closure	kUS$																200	200	200	200	200	200	2,000	**3,200**
Capex + Mine Closure	**kUS$**	**65,151**	**39,791**	**396**	**-**	**-**	**-**	**-**	**523**	**-**	**11,052**	**2,207**	**-**	**523**	**-**	**-**	**200**	**200**	**723**	**200**	**200**	**200**	**2,000**	**123,364**
Pre tax Cash Flow	**kUS$**	**(65,151)**	**(39,791)**	**12,786**	**9,605**	**9,837**	**17,536**	**16,201**	**19,359**	**15,998**	**(5,915)**	**1,958**	**4,863**	**8,354**	**13,695**	**17,790**	**13,550**	**14,658**	**4,812**	**18,662**	**27,970**	**27,905**	**11,077**	**155,758**
Taxation	**kUS$**			**312**	**-**	**-**	**676**	**602**	**1,324**	**724**	**-**	**-**	**-**	**725**	**1,237**	**1,675**	**1,243**	**1,362**	**355**	**2,017**	**3,967**	**4,126**	**1,883**	**22,228**
Net Cash Flow After Tax	**kUS$**	**(65,151)**	**(39,791)**	**12,474**	**9,605**	**9,837**	**16,859**	**15,599**	**18,035**	**15,274**	**(5,915)**	**1,958**	**4,863**	**7,629**	**12,457**	**16,115**	**12,306**	**13,297**	**4,457**	**16,645**	**24,002**	**23,779**	**9,195**	**133,529**

Net Present Value of Cash Flow After Tax	5%	34,521		IRR	8.3%

18.6.4 Project Sensitivities

Sensitivities were prepared looking to the impact of possible variations in the main variables. They are all based on the proposed case of 2 mtpa mining rate.

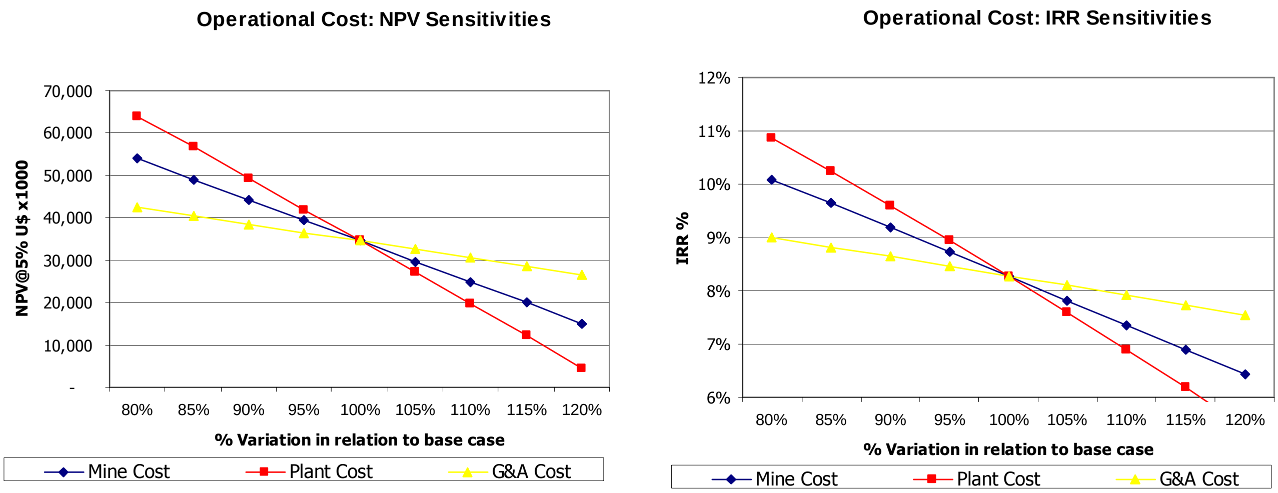


Figure 30 - Sensitivity to Operational Costs

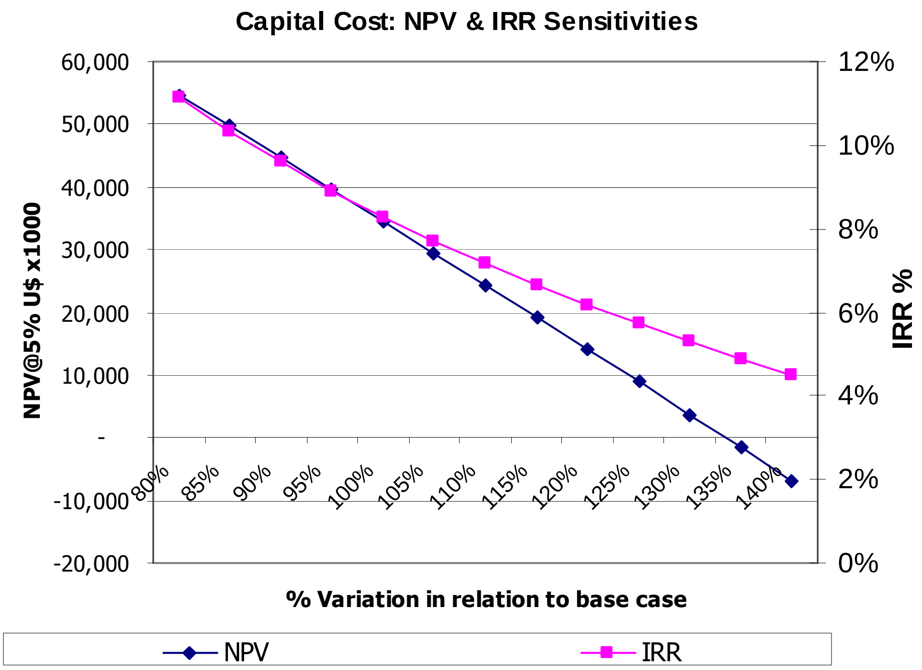


Figure 31 - Sensitivity of NPV and IRR to changes in the Capital Expenditure

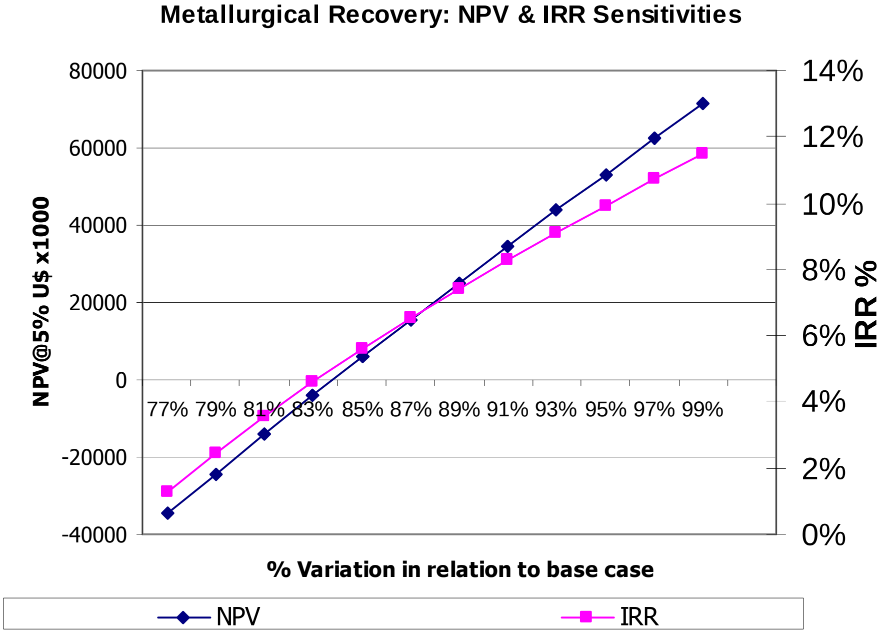


Figure 32 - Sensitivity of NPV and IRR to changes in the Metallurgical Recovery

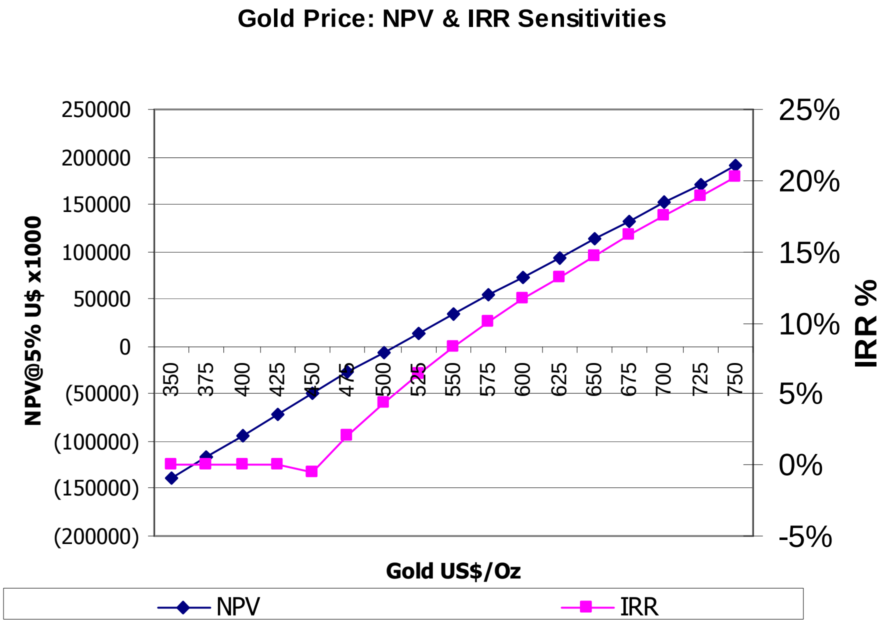


Figure 33 - Sensitivity of NPV and IRR to changes in the Gold Price

Comments: From the above graphs, it is evident that the most relevant factors affecting the economic return of the project are the metallurgical recovery and the gold price. Since there is no control on the latter factor, it is advisable to extend the metallurgical tests in order to ensure the recovery rate that will be used for the cash flow projections.
The operational costs may increase up to 20% in variation, and the project will still be attractive. However, attention should be given to the plant costs, since they are the most important element in the operational costs. Regarding the Capex, it is interesting to note that the project supports an increase of 35% in the capital costs and still keeps its attractiveness.

19. INTERPRETATION AND CONCLUSIONS

19.1 KEY STATISTICS

Key parameters of the study are given in Following Tables:

ITEM	UNIT/TYPE	AMOUNT
Waste Mining (LOM)	tonnes (000)	109,387
	W:O ratio	2.84
Ore Milled (LOM)	tonnes (000)	38,546
	Au g/t	1.41
Ore Milled – Annual production	tonnes (000)	2,000
Years in Construction	Unit	2
Years in Operation	unit	20
Average annual gold production	Au Koz	82,000
Manpower	Workers	412

Table 37 - Operational Parameters

ITEM	UNIT/TYPE	AMOUNT
Mining cost per tonne mined	US$/tonne	1.2
Mining cost per tonne milled	US$/tonne	4.43
Processing cost per tonne milled	US$/tonne	7.46
General & Admin cost per tonne milled	US$/tonne	2.00
Environment cost per tonne milled	US$/tonne	0.60
Total cash cost per tonne milled	US$/tonne	14.49
Total cash cost per gold ounce produced	US$/oz	360

Table 38 - Unit Costs

ITEM	UNIT/TYPE	AMOUNT
Net Smelter Return	US$ 000	853,380
OPERATING COSTS		
Mining Costs	US$ 000	170,907
Processing Costs	US$ 000	287,764
G&A Costs	US$ 000	77,093
Environment Costs	US$ 000	23,128
Total Operating Costs	US$ 000	558,891
Operating Margin	US$ 000	279,122
Initial Capital Expenditures	US$ 000	104,942
Sustaining CAPEX	US$ 000	15,222
LOM Pre-Tax Cash Flow	US$ 000	155,758
Taxation	US$ 000	22,228
LOM Net Cash Flow	US$ 000	133,529
NPV (5%) of net cash flow	US$ 000	34,521
IRR	%	8.28%

Table 39 - Financial Parameters

Cautionary Statement: *This economic assessment is based partially on Inferred Resources, and its accuracy does not match the pre-requisites of a Pre-Feasibility Study, which is the minimum requirement for the conversion of Measured and Inferred Resources into Reserves. This preliminary assessment includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the results of the preliminary assessment will be realized.*

19.2 COMMENTS

Brazauro has upgraded the Tocantinzinho property from a greenfields exploration target to a mid-stage gold project on the Amazon region in Brazil, with adequate surface mapping and diamond drilling and a significant amount of metallurgical studies completed. Diamond drilling has defined the deposit to a depth of at least 280 m below surface. A gold deposit on hydrothermally altered granite has been identified, amenable to bulk mining using standard open pit techniques. The metallurgical tests indicate that a flotation circuit followed by the cyanidation of the concentrate would be a low cost process, with low environmental impact and recovery in the order of 91%.

NCL estimated the necessary Capital Expenditure to construct a 2 million tonnes/year operation as a total of US$ 105 million. Although the area is remote, presenting some challenges to bring infrastructure, the project economics are solid and can support this expenditure. The operational costs were estimated as US$ 360 / oz, which is in line with other projects under similar conditions.

There are a number of blue-sky opportunities in the Tocantinzinho Project that needs to be taken into account to correctly appreciate the potential of this project. They are:

A quick estimate made by NCL indicates that the NPV increase at least by 50% if the production scale is increased to 3 million tonnes/year. This fact leads to the conclusion that the project scope, as well as many other engineering aspects, may be optimized by further studies, leading to improvements in the economics of the project. However, there is no guarantee that the necessary power will be available.

High grade intercepts at the Southeast of the deposit, as well as diverse other targets in the areas controlled by Brazauro, may be confirmed as new discoveries, extending the life of the project.

The processing of the garimpeiros tailings may bring a substantial contribution to the gold production, since it is known that the gold recovery obtained by the artisanal methods is poor.

As inherent to every mining project, there are risks that need to be considered. Most important of all is the risk that inferred resources may not be converted to reserves, and even that the indicated resources have a variability in grade and tonnage that may affect the economics of the project. Other risks that may be mentioned are the environmental risk and those related to cost estimation. Further studies should minimize these risks.

20. RECOMMENDATIONS

The following recommendations can be made to improve the understanding of this project:

- Plan and execute a infill program destined to upgrade a portion of the inferred resources to a indicated category, allowing them to become reserves, after the preparation of the feasibility study.
- Engage a team of surveyors and improve the topographic survey of the area, including the area destined for tailing dams and waste dumps
- Perform a check analysis, selecting 10% of the samples inside the orezone and send to a third laboratory, to check the accuracy and precision of the results obtained so far.
- Engage a company specialized in environmental studies and start the preparation of an EIA-RIMA study, destined to obtain a LP (Provisory License), a process that usually takes more than one year, what may delay a quick start up of the project, if so decided.
- Proceed to the next stage of studies, preparing a Pre-Feasibility or even a full Feasibility study.
- Commence discussions with the energy companies, CELPA, the Para state energy agency, to ensure sufficient energy supply in order to allow the company to enhance the production schedule from 2 mtpa to 3 mtpa.

21. REFERENCES

1. G. Cavey, P.Geol., D. Gunning, P.Eng. Orequest, July 10, 2003, Summary Report on the Tocantinzinho Concession. Pará State, Brazil for Star Resources Corporation.
2. James W. Stewart, Ph., July 24, 2004, Report on Visit to Jaguar Resources' Tocantinzinho Property, Pará State, Brazil, July 1-6, 2004.
3. Ministério de Minas e Energia, Secretaria de Minas e Metalurgia, CPRM-Serviço Geológico de Brasil, Brasília 2000, Geologia e Recursos Minerais Da Folha Vila Riozinho. FOLHA SB.21-Z-A. Estado de Pará.
4. SGS Lakefield Research Limited, LR 10974-001- Final Report, April 27, 2005, An Investigation of Gold Recovery from Tocantinzinho Properties Samples. Prepared for Brazauro Resources.
5. Bruce Geller, Advanced Geologic Services, May 27, 2004, Tocantinzinho Petrographic Report prepared for Jaguar Resources Corporation.
6. Bruce Geller, Advanced Geologic Services, July 18, 2004, Tocantinzinho Petrographic Report prepared for Jaguar Resources Corporation.
7. James R. Shannon, Ph. D., Research Associate, Colorado School of Mines, January 14, 2005 Petrological Report Prepared for Brazauro Resources Corp.
8. Brandt Meio Ambiente, October, 2005, Consultation Process for the Definition of Conservation Areas Along BR-163 on the Tapajós River Valley, State of Pará, Brazil. Prepared for Jaguar Resources Do Brasil Ltda.
9. Brazauro Resources Corporation, November, 2005, Tocantinzinho, Mamoal and Batalha Gold Projects. Tapajós Gold District; Pará State, Brazil.
10. Reference to the above documents also includes the electronic spreadsheets, maps, and text included with the publication.
11. Brazauro Resources Database, September 2006, Tocantinzinho drilling logs, assay Reports, internal documents and other studies.
12. Pincock, Allen & Holt, August 10-15, 2006, Site visit to Tocantinzinho exploration property
13. Sandor Ringhoffer, Tocantinzinho Cross Sectional Resource Estimate. November 10, 2006.
14. Brazauro Resources, Tocantinzinho geologic interpretation and cross sections by Stephen Zahony, VP Exploration. August – October, 2006.
15. Pincock, Allen & Holt, September 2006, Tocantinzinho exploration property geologic modeling and resource estimates.
16. Pincock, Allen & Holt, November 2006, Technical Review of the Tocantinzinho Exploration Project in the Tapajôs District, Pará State, Brazil (43.101 report).

22. CERTIFICATE OF QUALIFICATION

CERTIFICATE OF AUTHOR

As the author of this report on Tocantinzinho gold deposit, pertaining to Brazauro Resources Corp, I, Rodrigo Mello do hereby certify that:

1. I am associated to, and carried out this assignment for,

NCL Brasil Ltda
Alameda da Serra 500, Vale do Sereno
Nova Lima, MG
34000-000
Tel: 5531-32866126

2. I hold the following academic qualifications:

B.Sc. (Geology)	Minas Gerais University 1985
Specialization (Computing)	Goiás Catholic University 1999
In progress: MSe (Engineering)	Witwatersrand University 2000

3. I am a registered Geologist with the Regional Council of Engineering, Minas Gerais (membership number 40/462-D); as well, I am a member in good standing of some other technical associations and societies, including the Australasian Institute of Mining and Metallurgy (Member).

4. I have worked as a geologist and project manager in the minerals industry for 21 years.

5. I am familiar with NI 43-101 and, by reason of education, experience and professional registration, I fulfill the requirements of a Qualified Person as defined in NI 43-101. My work experience includes 9 years as a exploration geologist/manager working in archean and tertiary environments, 9 years as a mineral resource analyst working in the evaluation of gold, copper, zinc, nickel and silver deposits, and 3 years working in project management of a gold open pit mine, dealing with all aspects of mine planning and plant construction.

6. I am responsible for the preparation of this technical report titled "A Preliminary Assessment of the Tocantinzinho Gold Project, Tapajós Gold District, Pará State, Brazil", and dated September, 2007. I visited the Tocantinzinho site before starting this work, on August, 6th to 7th, 2007.

7. I am not aware of any material fact, or change in reported information, in connection with the subject properties, not reported or considered by me, the omission of which makes this report misleading.

8. I am independent of the parties involved in the transaction for which this

report is required, other than providing consulting services.

9. I have read NI 43-101 and, the Technical Report and I hereby certify that the Technical Report has been prepared in accordance with NI 43-101 and meets the form requirements of Form 43-101 F1.

Dated this 26th day of September, 2007

Rodrigo de Brito Mello