

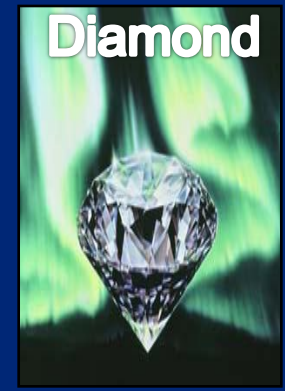
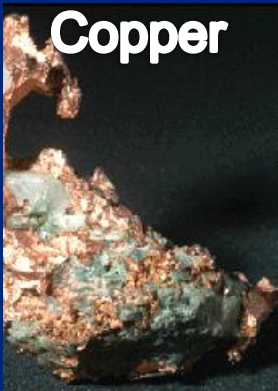
MINAS-RIO PROJECT

IRON ORE BRAZIL



WHO WE ARE

- One of the biggest world mining companies.
- Around 150.000 employees.
- Global production leader in platinum and diamond, and with a significant participation in the copper, nickel, iron ore, metallurgical coal and thermal coal.



WHERE WE ARE

- Around 30 countries.
- Operations at Africa, South and North America Oceania e Asia.
- Headquarters in London - UK

ANGLO AMERICAN IN BRAZIL

- Since 1973.
- More than 17,000 employees (direct and indirect).
- Around US\$14 bi of investments in Brazil since 2007.
- 2 Business Units: Iron Ore and Nickel.
- Business of Niobium and Fosfato (Mineração Catalão) e Fosfato (Copebrás).
- One of the largest AngloAmerican investments in the world (Minas-Rio and Barro Alto Projects).



MINAS-RIO PROJECT

Minas Rio is one of the largest iron ore Greenfield project under development with low cost/long life profile.

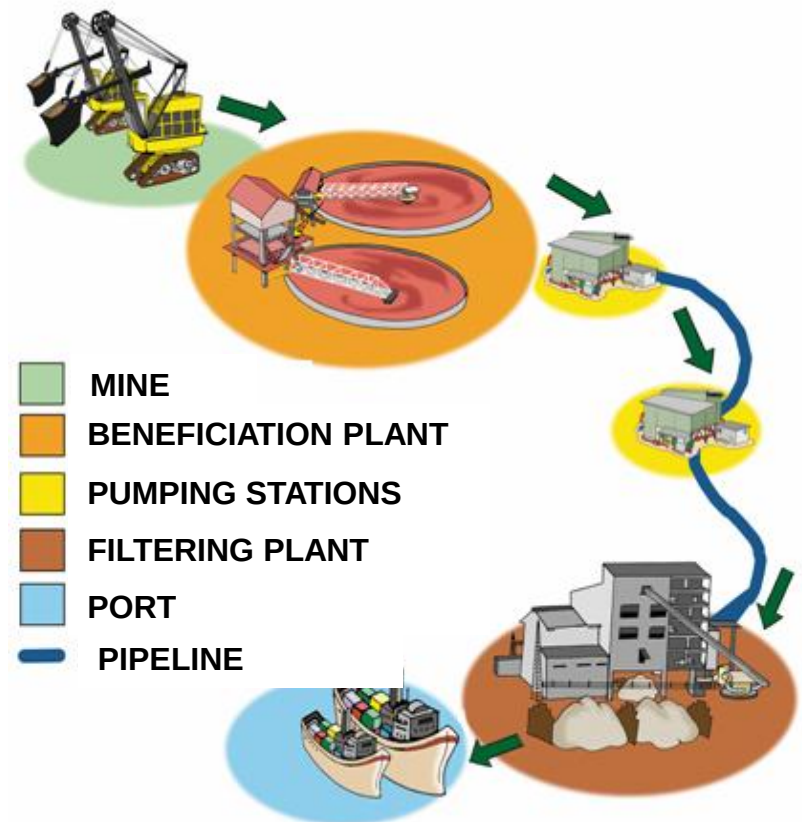
Total current mineral resources (JORC) is around 6 Bt and with a strong exploration potential.

Production will start by Q4 2013, reaching 29.8 Mtpa capacity run-rate by 2014. The initial ROM will be around 60 Mtpa with a stripping ratio of 0.4 .

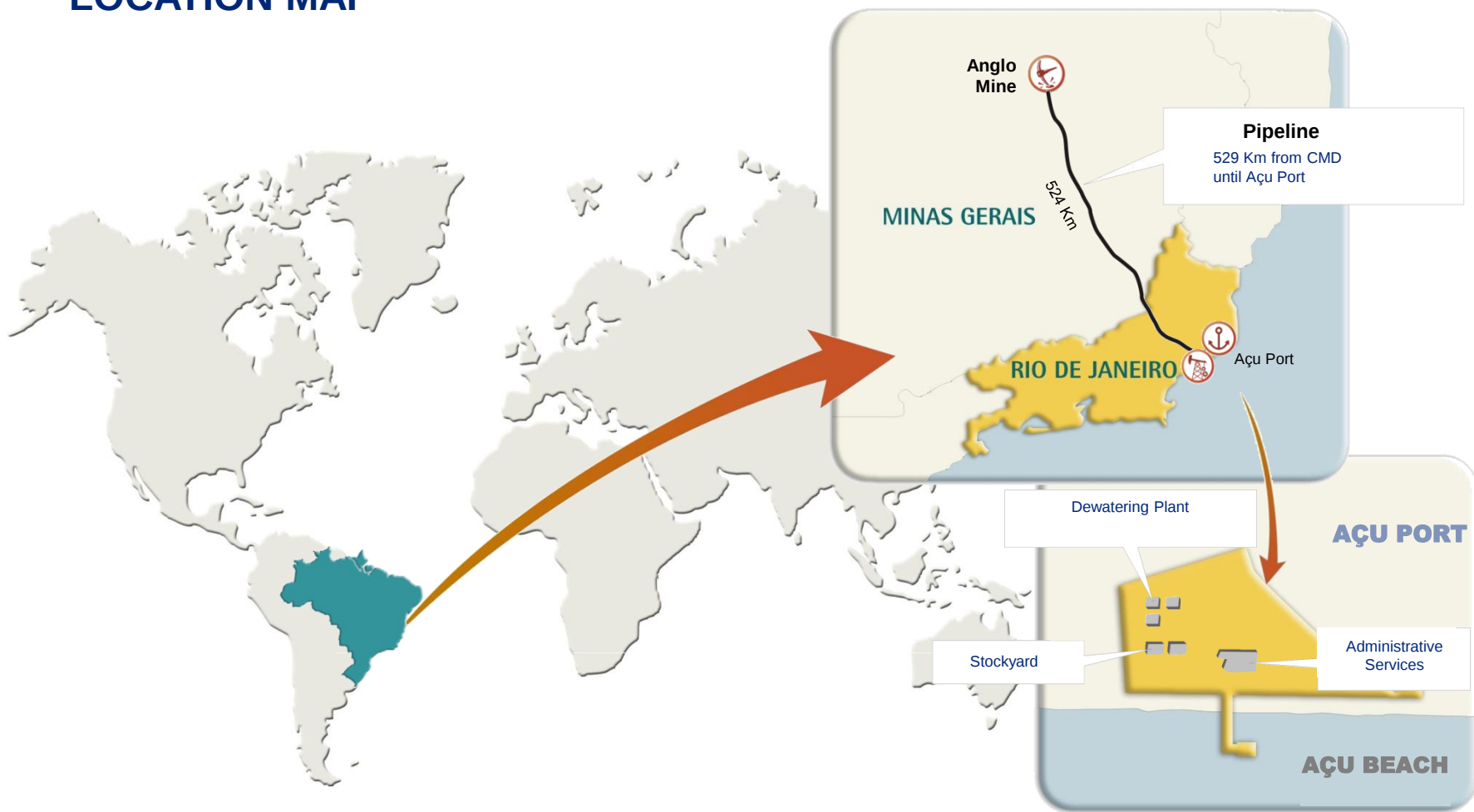
Minas Rio projected in the bottom quartile of the cost curve.

It is constituted by an integrated system : open pit mine; beneficiation plant (Minas Gerais State); 535 km pipeline; filtering plant and port (Rio de Janeiro State).

The mine comprises the development of 2 itabirite/hematite deposits (Serra do Sapo and Itapanhoacanga) composed by friable and compact ores.



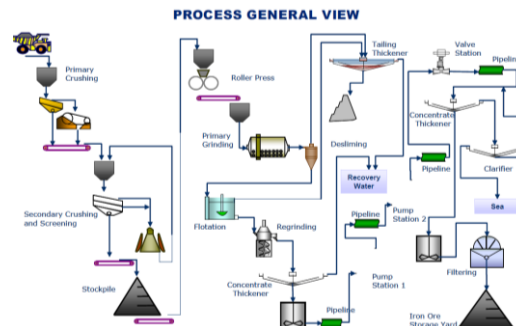
LOCATION MAP



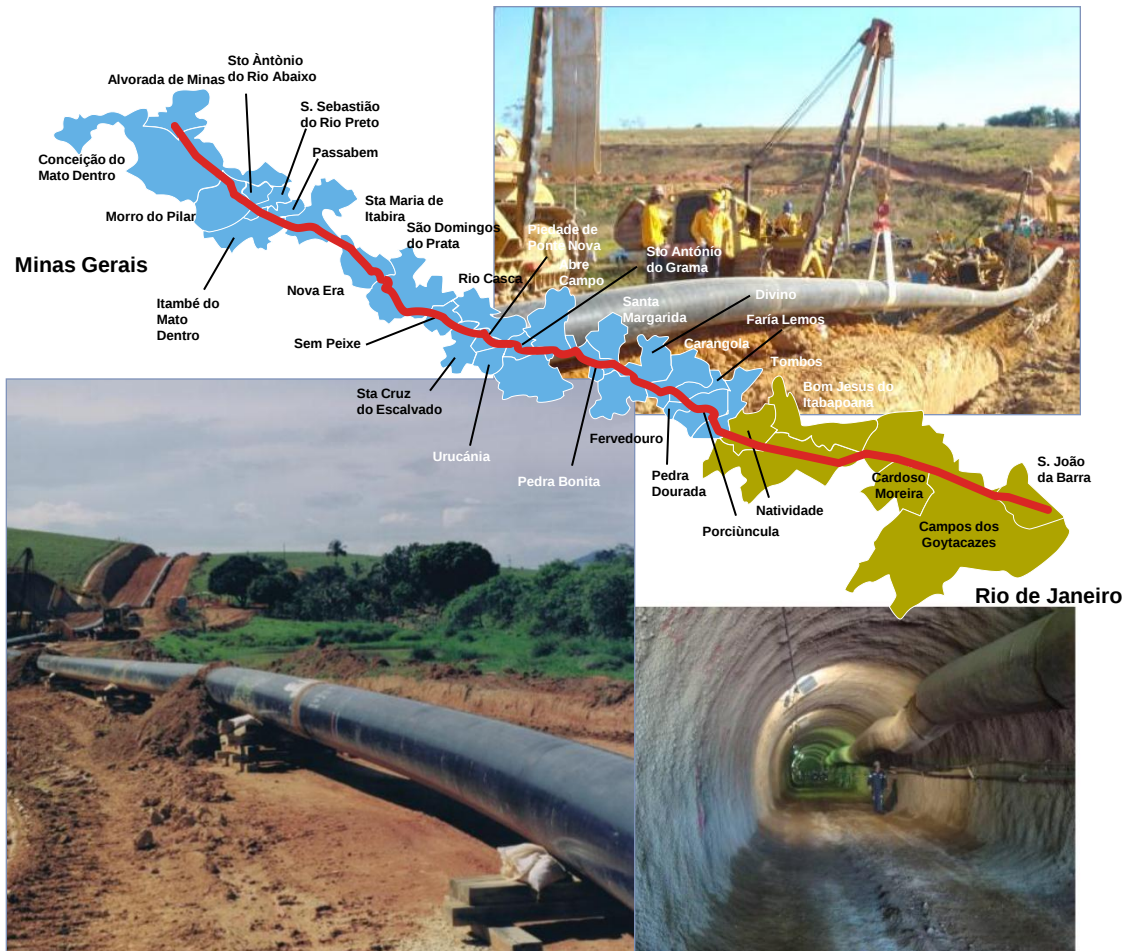
BENEFICIATION PLANT



- Average plant feed ROM of 56Mtpa at 39.5% Fe content during the ramp up.
- Conventional flow sheet with plant capacity to produce 29.8Mtpa of 68% Fe pellet feed
- Excellent metallurgical recoveries of 80% (45% mass recovery)



SLURRY PIPELINE



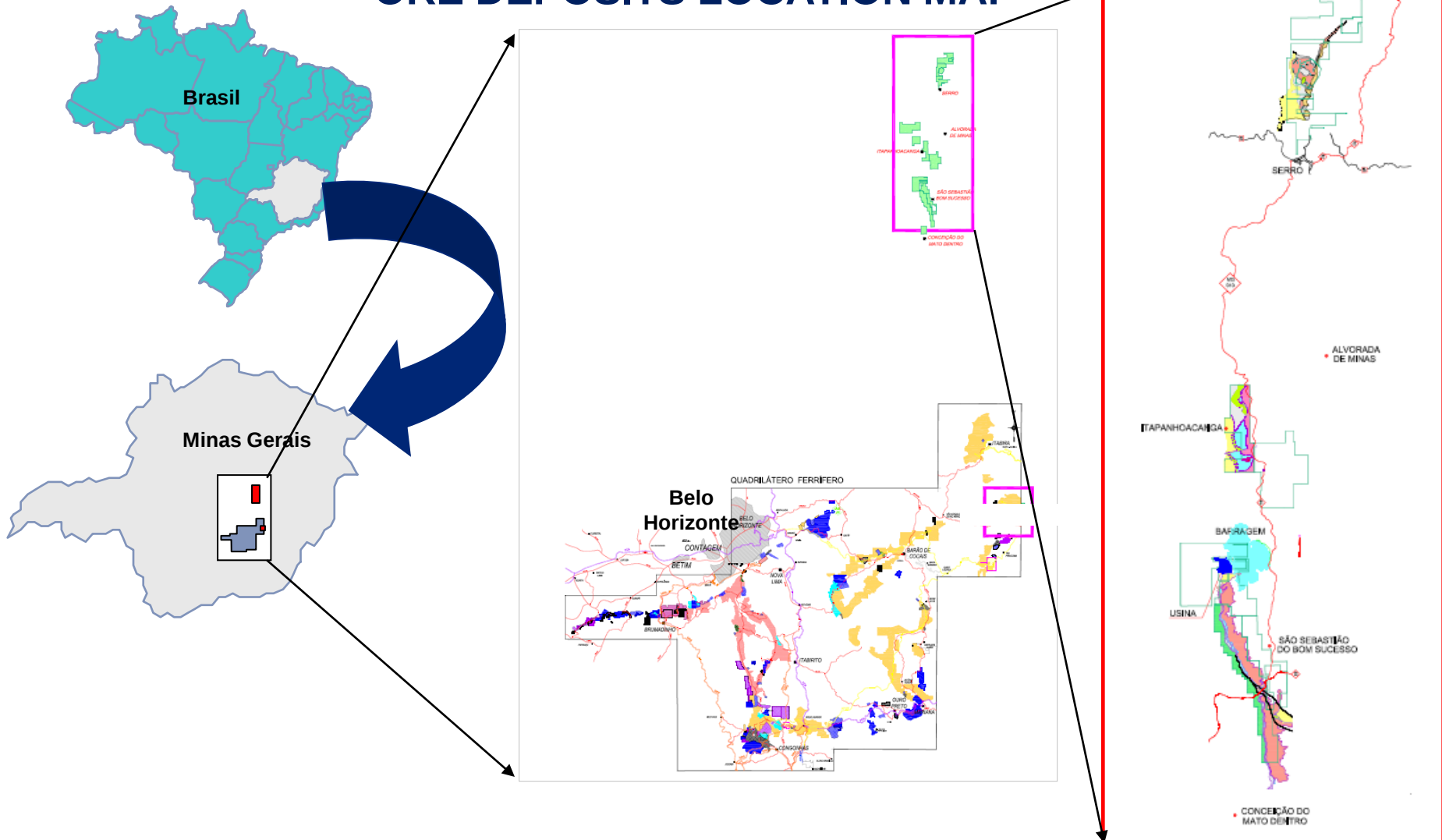
- Total slurry pipeline length of 530km
- 24-26 inch variable diameter and 29.8Mtpa operating capacity
- Slurry propelled by gravity with two pump stations and one valve station, developed in three spreads
- Sole use transfer corridor with room for at least two additional pipelines

PORT



- 100% owned by LLX Minas Rio (49% Anglo American Iron Ore Brazil; 51% LLX SA)
- Priority access rights for Minas Rio iron ore
- Capable of handling 250,000dwt Capesize vessels (21m draft)
- Planned expansion to Chinamax vessels (26m draft)
- Sufficient land available to expand the port to over 80mtpa and/or add downstream operations

ORE DEPOSITS LOCATION MAP

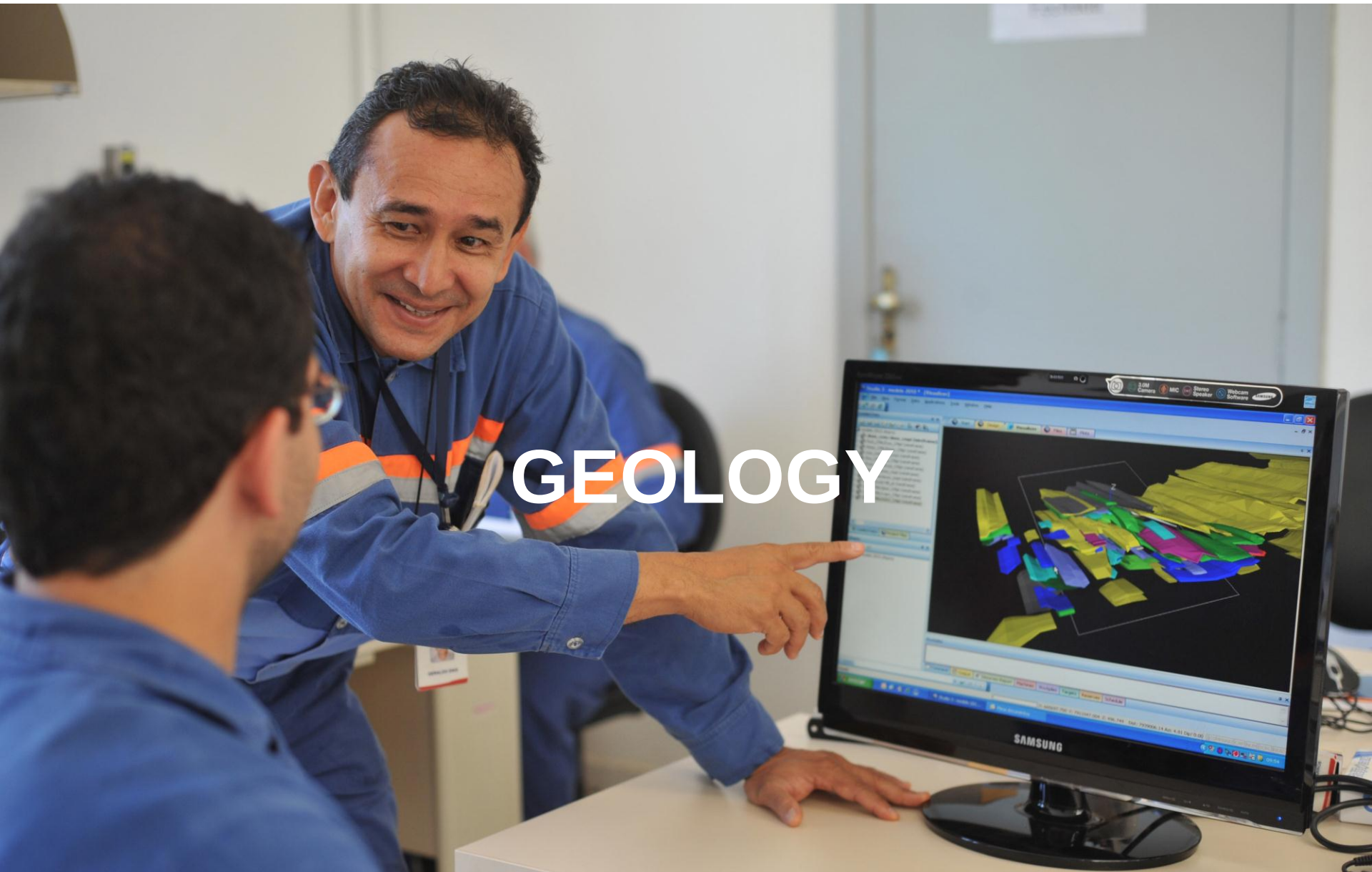


SERRA DO SAPO



SERRA DE ITAPANHOACANGA

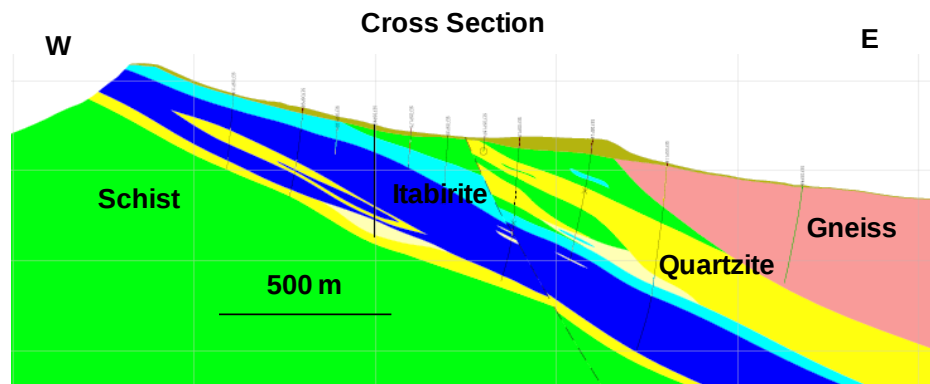
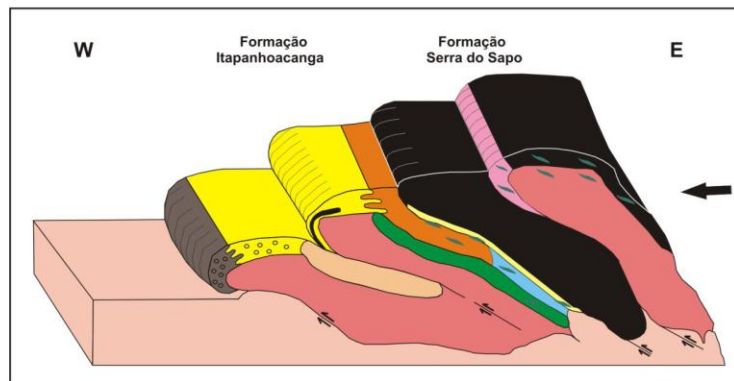
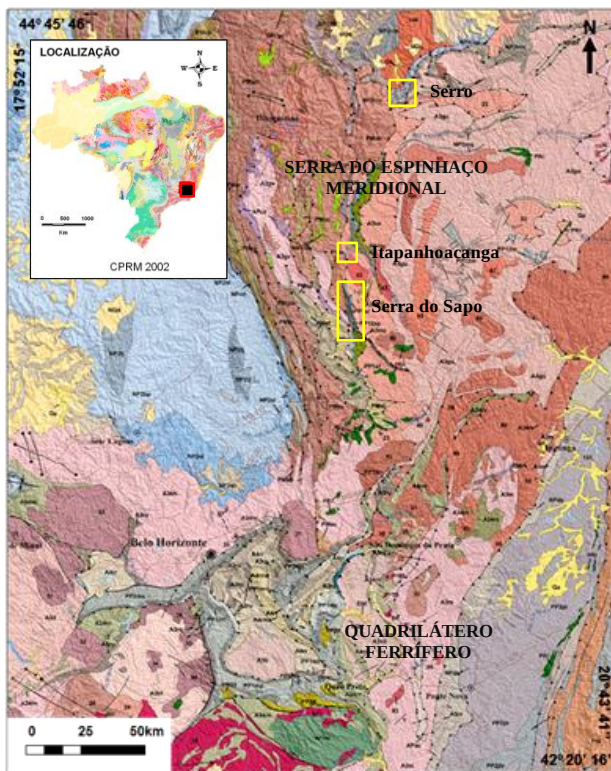


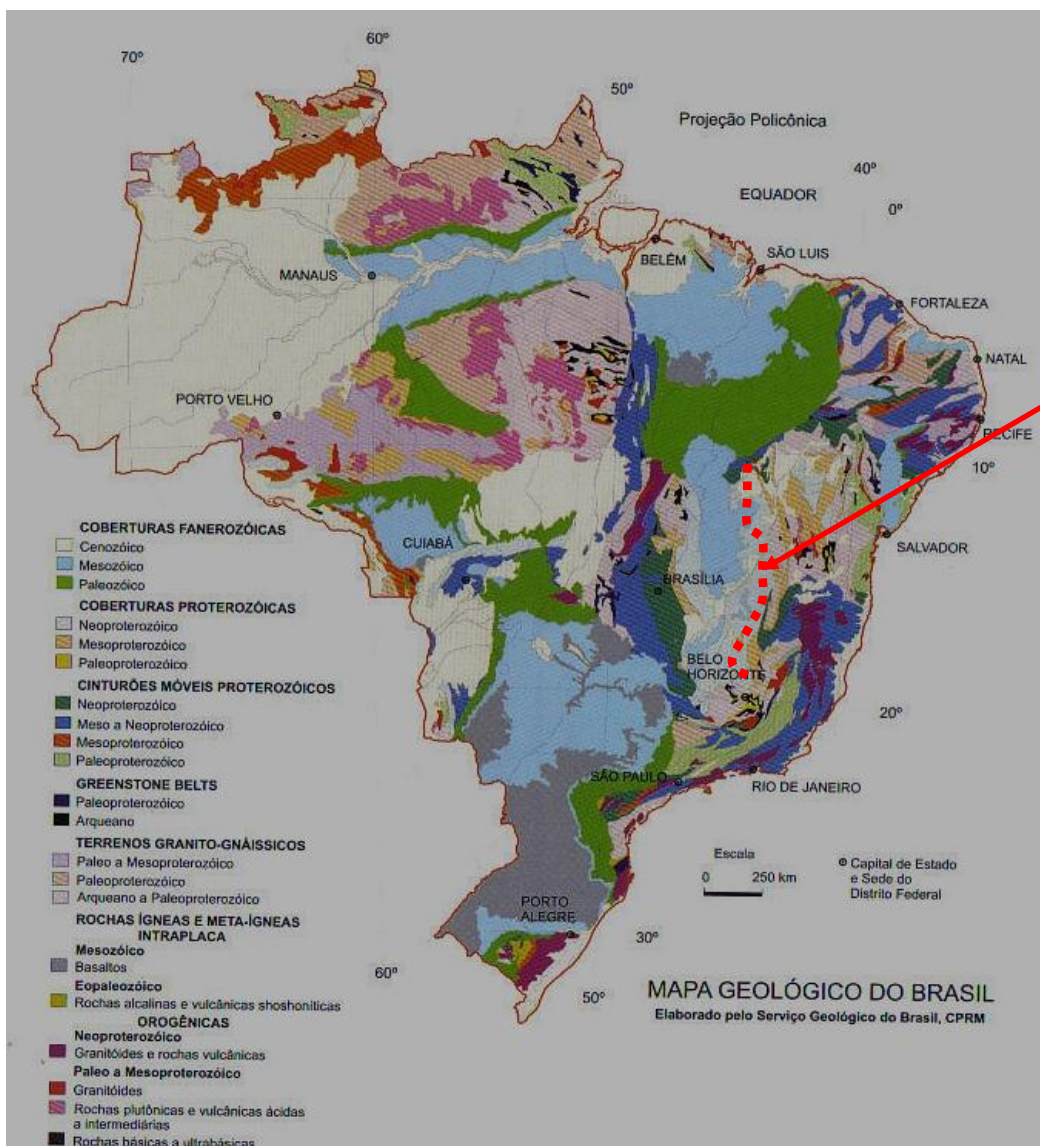


GEOLOGY

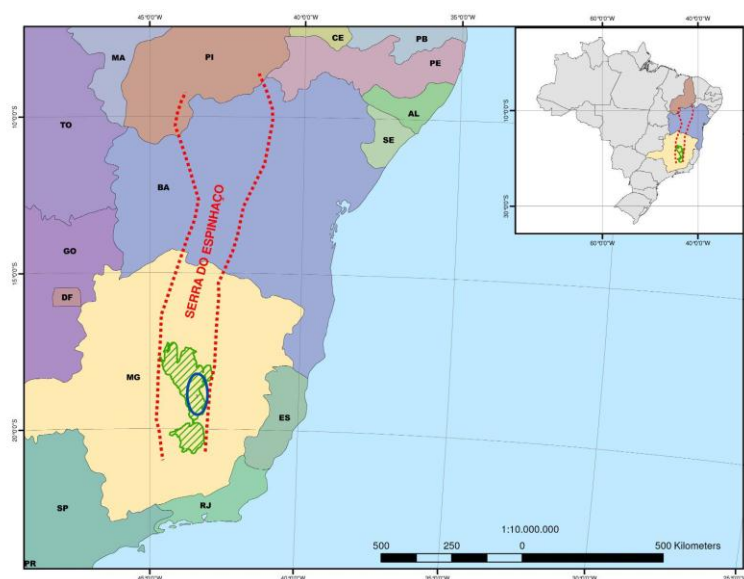
REGIONAL GEOLOGY

The Minas-Rio Project is inserted in the southeast border of the São Francisco Craton (Almeida, 1977) and comprises world class iron deposits. The main iron ore is concentrated in a medium unit of the Serra do Sapo Formation which corresponds to a large banded iron formation. The outcrops occur along a narrow ridge of 12km length in NNW-SSE strike and moderately dipping (25°) to the East. All these sequences are controlled by thrust fault systems that are responsible for local duplications, inversions or suppression of the beds.

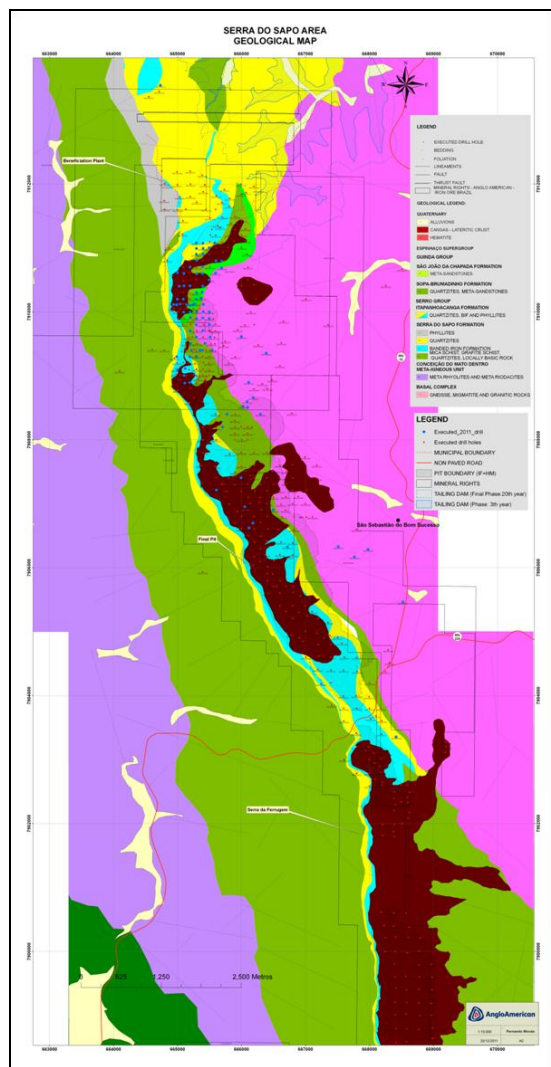




Paleo-Mesoproterozoic Mobile Belt –
1200 km extension



LOCAL GEOLOGY



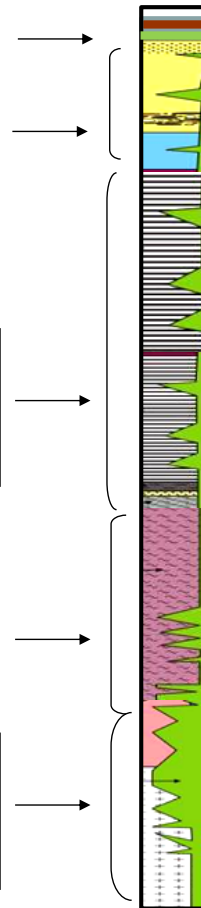
Intrusive Amphibolites: greenish amphibolitic schists, coarse-grained and talc-chlorite schists.

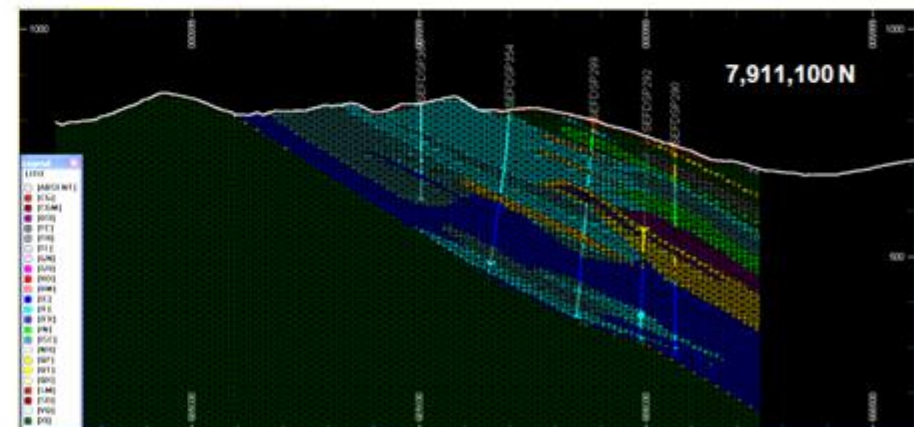
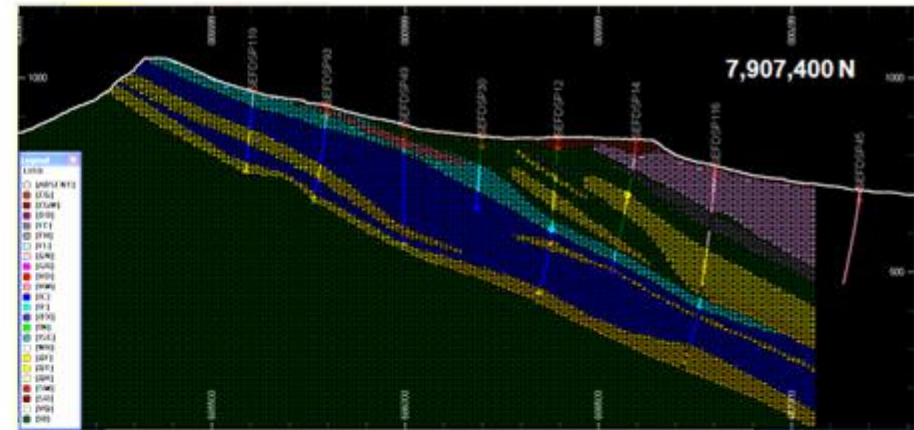
Serra do Sapo Formation, Top Unit: white to yellowish quartzites, fine to medium-grained intercalated by planes micaceous (sericite), without conglomeratic levels and without cross-stratification. Carbonate rocks: pink dolomites, often brecciated containing itabirites intercalations, mainly on the basis.

Serra do Sapo Formation, Intermediate Unit: Itabirites containing metrics intercalations of banded phyllites / sericite schists and ferruginous quartzite at the base, and white quartzites at the top.

Serra do Sapo Formation, Basal Unit: gray phyllites, containing crystals of euhedral magnetite; black to dark gray (graphitic) phyllites, micaceous / ferruginous quartzites, gray to white, in form of decimetric to metric banks.

Conceição do Mato Dentro Metagne Unit:
intermediated rock as metarhyolites and metariodacites;
Granitoid suites: granitoid Jacem and Dom Joaquim
Guanhães Group: banded gneisses, grenatiferous schists,
quartz muscovite.





ORE TYPES

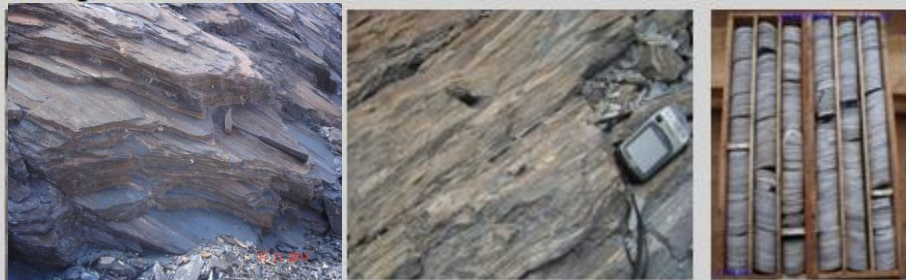
Friable Itabirite



Semi-Compact Itabirite:



Compact Itabirite:



Hematite:



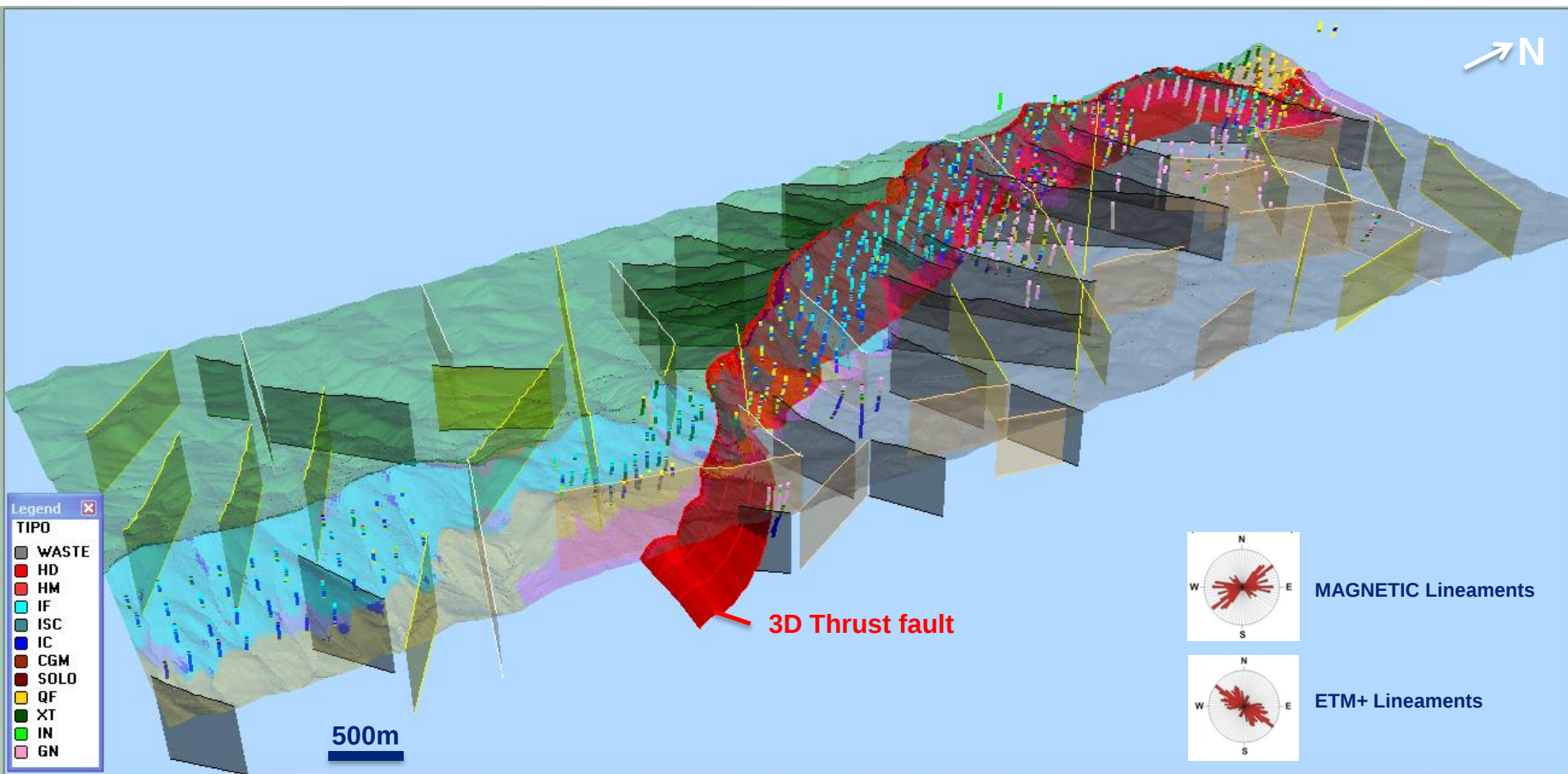
High Alumina Friable Itabirite



Canga



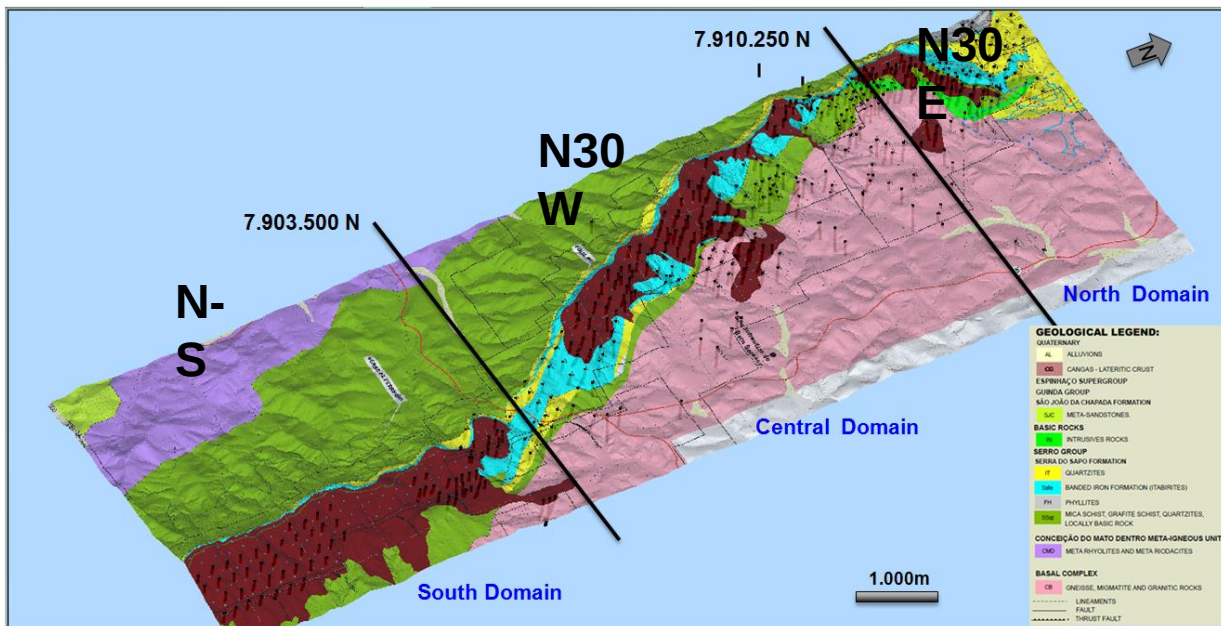
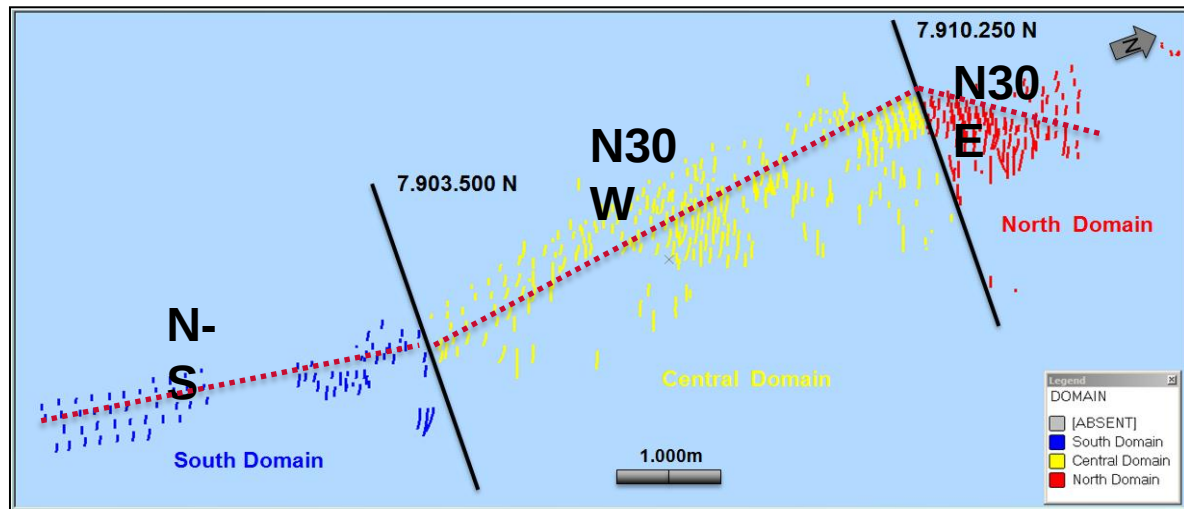
ESTRUCTURAL GEOLOGY



GEOLOGICAL DOMAINS

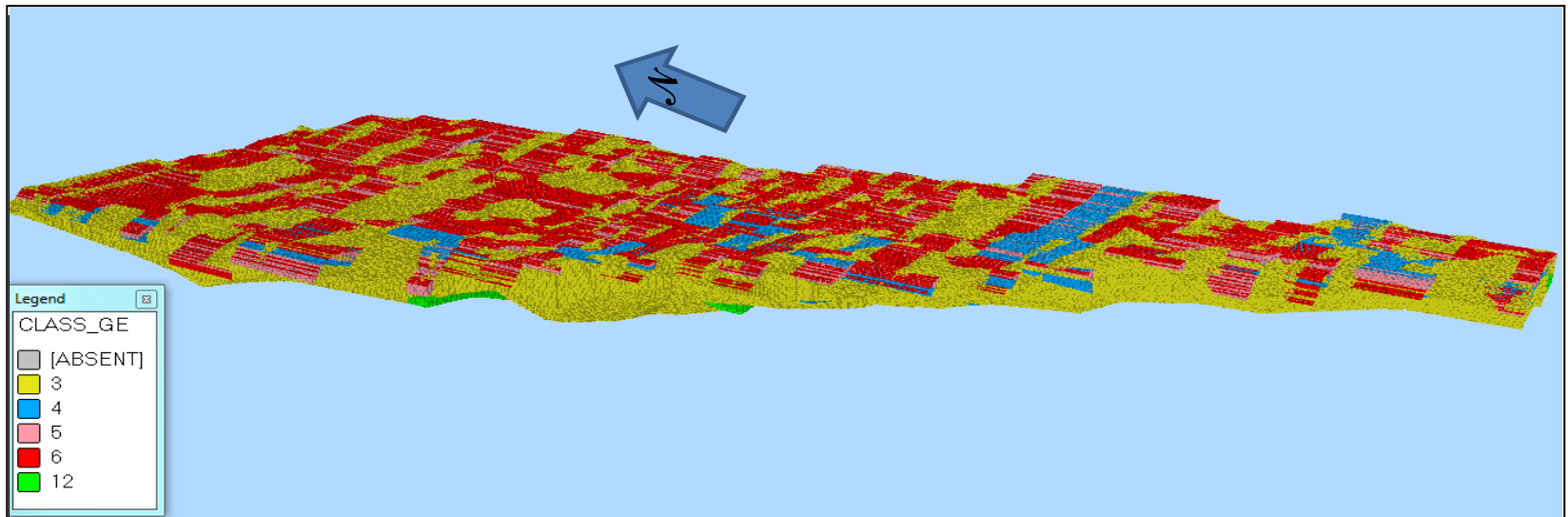
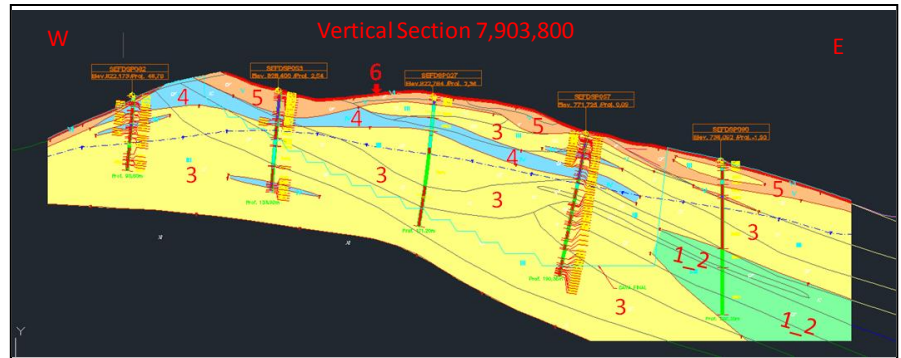
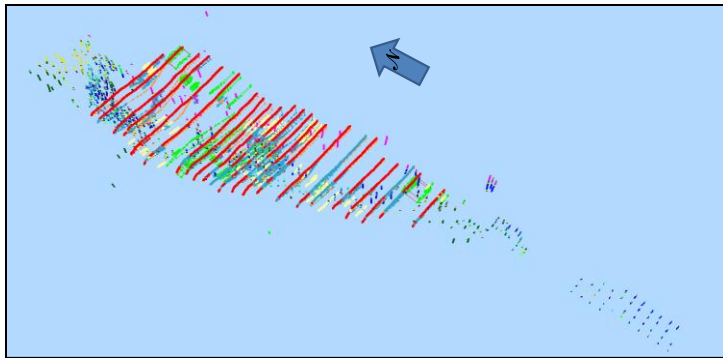
Based on:

- Strike direction
- FE grade
- Structural control
- Contaminates (AL, P, SI)



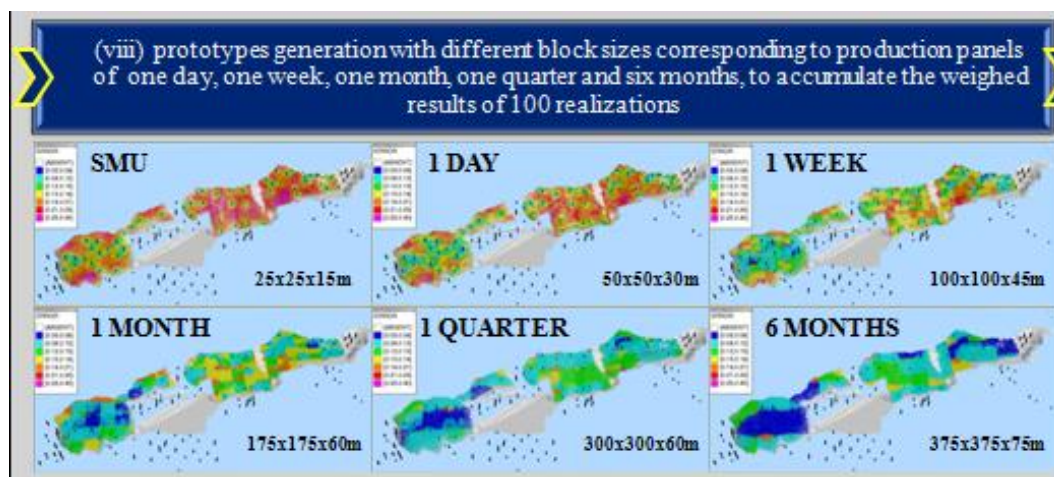
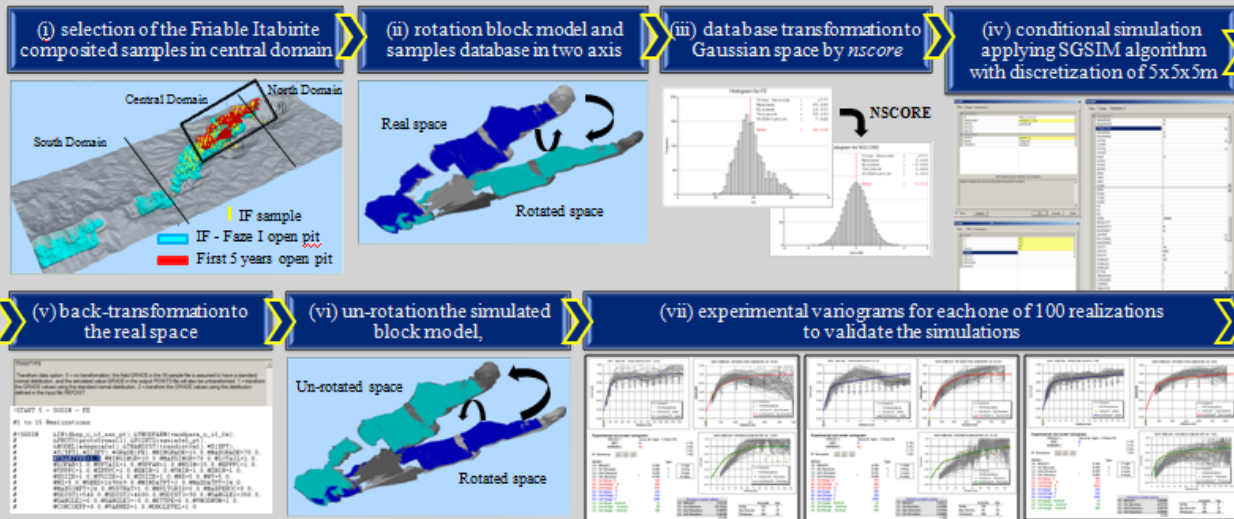
GEOTECHNICAL MODEL

Based on: sections interpreted by VogBr consultant; lithologies; mechanical strength (RQD and lab tests); degree of rock alteration; and piezometric surface level .

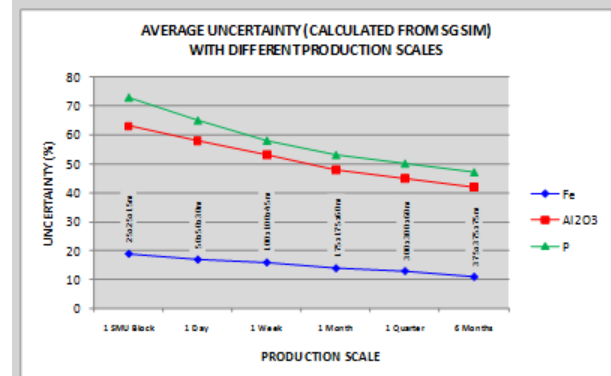


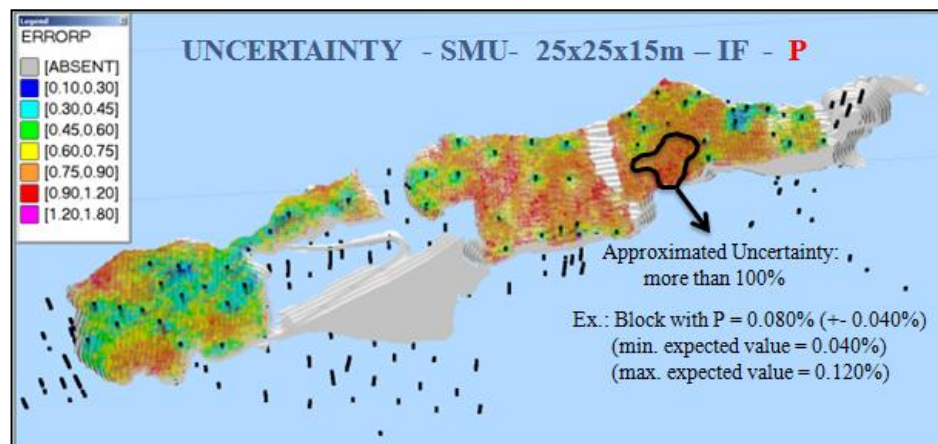
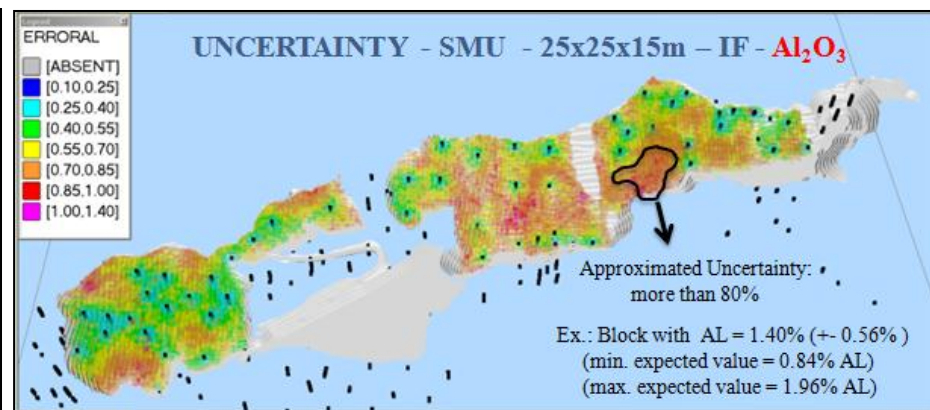
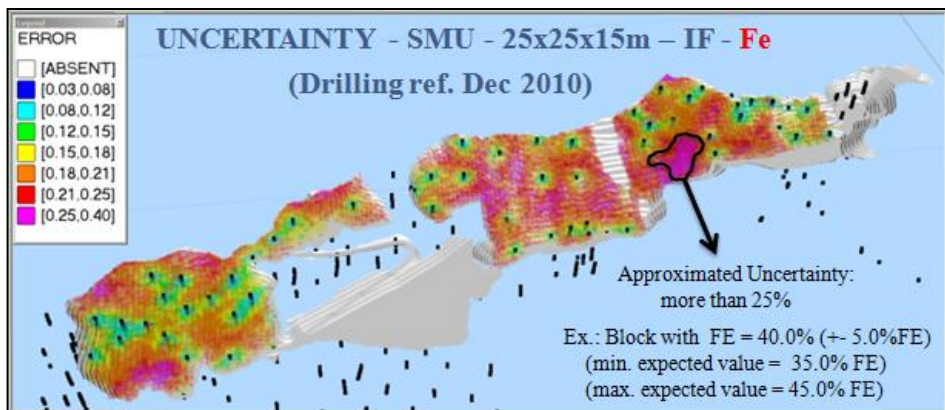
CONDITIONAL SIMULATION

CONDITIONAL SIMULATION WORKFLOW



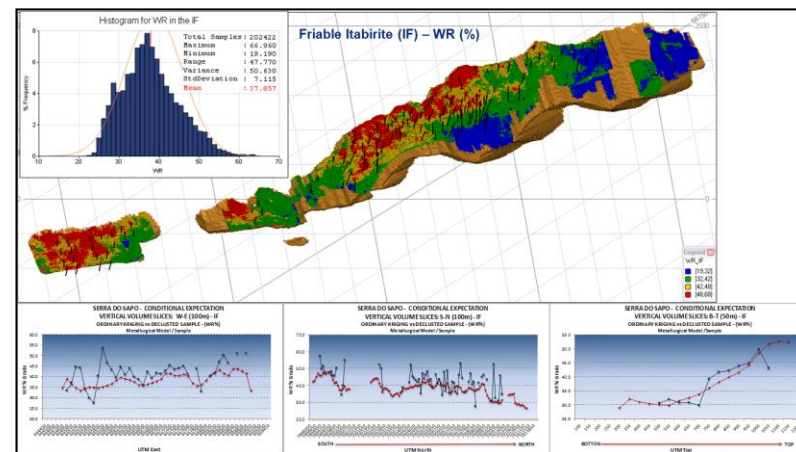
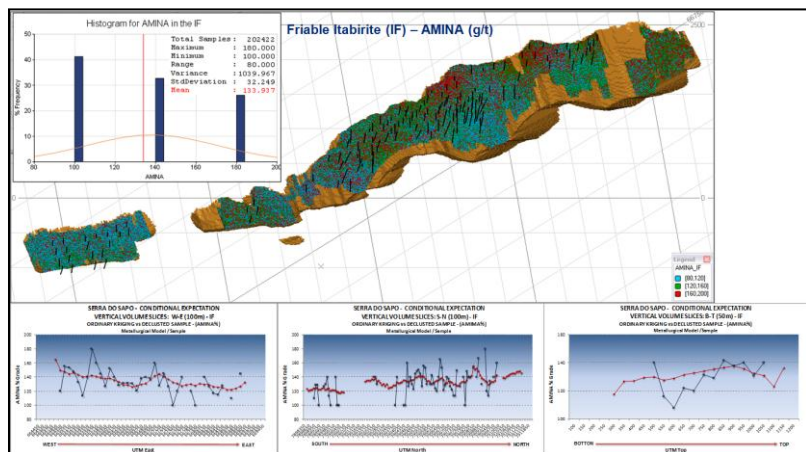
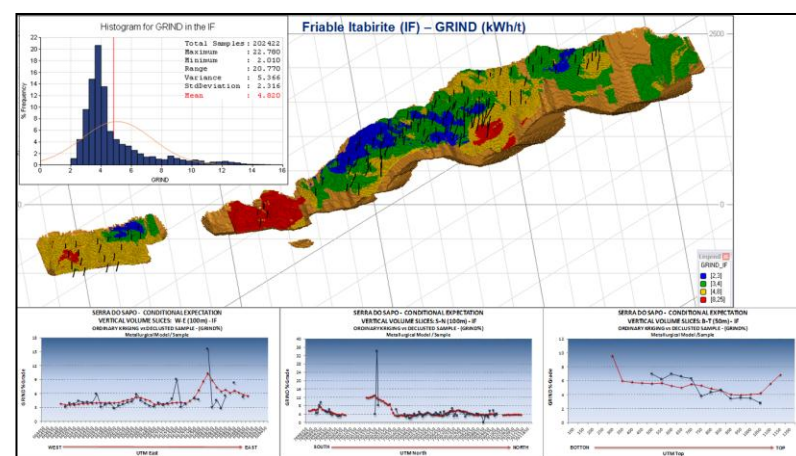
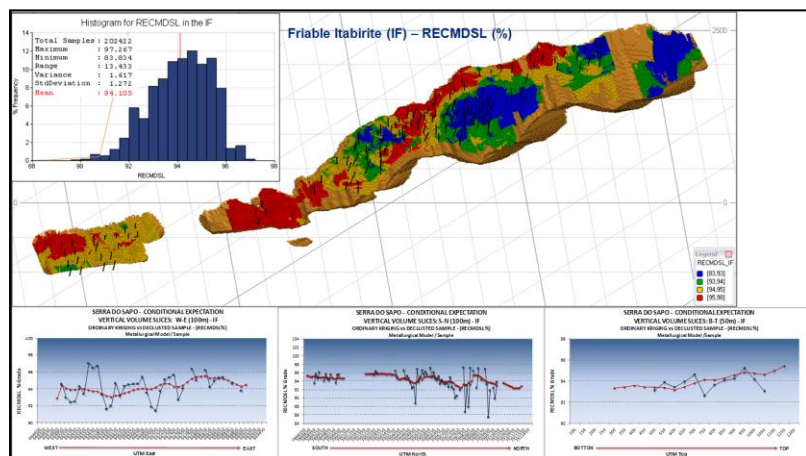
PERIOD	PRODUCTION		UNCERTAINTY (%) CALCULATED FROM SGSIM		
	ROM (Tonnes)	BLOCK SIZE (m)	Fe	Al ₂ O ₃	P
6 Months	26,894,531	375x375x75	0.11	0.42	0.47
1 Quarter	13,770,000	300x300x60	0.13	0.45	0.50
1 Month	4,685,625	175x175x60	0.14	0.48	0.53
1 Week	1,147,500	100x100x45	0.16	0.53	0.58
1 Day	191,250	50x50x30	0.17	0.58	0.65
1 SMU Block	23,906	25x25x15	0.19	0.63	0.73





GEOMETALURGICAL MODEL

The purpose is the possibility to predict parameters related to the performance of the ore at the plant, such as grindability, mass recover and grades of iron or contaminates in the product.



MINERAL RESOURCES - ANGLOAMERICAN CLASSIFICATION (besides to be in accordance with the JORC Code)

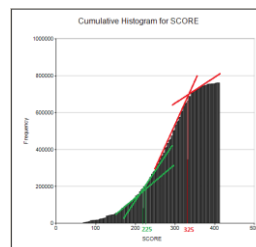
SCORECARD SYSTEM – MINERAL RESOURCES CLASSIFICATION

ITEM	BASIS	WEIGHT (total=100)	SCORE BY DOMAIN (0-5)			WEIGHTED SCORE (0-500)		
			North	Center	South	North	Center	South
1. Geological Confidence								
1.1. Geological Understanding								
1.1.1. Geological Complexity	Section by section	25	{0 to 5}	{0 to 5}	{0 to 5}	{0-125}	{0-125}	{0-125}
1.1.2. Number of Drillholes in each section								
1.2. Ore Probability	Block	20	{0, 1, 3 or 5}	{0, 1, 3 or 5}	{0, 1, 3 or 5}	{0-100}	{0-100}	{0-100}
2. Density/Tonnage Confidence	Block (KVDENS)	20	{0, 1, 3 or 5}	{0, 1, 3 or 5}	{0, 1, 3 or 5}	{0-100}	{0-100}	{0-100}
3. QA/QC								
3.1. No QA/QC (DD 0-88)	Block \ Regions	15	1	1	1	15	15	15
3.2. Blank (DD 89- 190)			2	2	2	30	30	30
3.3. Blank + Duplicates (DD 191- 255)			3	3	3	45	45	45
3.4. Blank + Duplicates + 5CRMs (DD 256 - 381)			4	4	4	60	60	60
3.5. <i>Post Mortem</i>			{+1}	{+1}	{+1}	{+1}	{+1}	{+1}
3.6. <i>Failure in QAQC analysis (penalty)</i>			{-1}	{-1}	{-1}	{-1}	{-1}	{-1}
4. Estimation Quality								
4.1. Variogram Quality								
4.11 - HM	Domain \ Lithology	10	1.5	1.5	1	15	15	10
4.12 - CG			1	2	1	10	20	10
4.13 - IF+IFX			3.5	4	3	35	40	30
4.14 - ISC			3	3.5	3	30	35	30
4.15 - IC			3	3.5	2.5	30	35	25
4.2. Kriging Quality - Slope of Regression								
4.2.1. FE	Block	7	{0, 1, 3 or 5}	{0, 1, 3 or 5}	{0, 1, 3 or 5}	{0-35}	{0-35}	{0-35}
4.2.2. AL		3	{0, 1, 3 or 5}	{0, 1, 3 or 5}	{0, 1, 3 or 5}	{0-15}	{0-15}	{0-15}

- Scores for Ore Probability

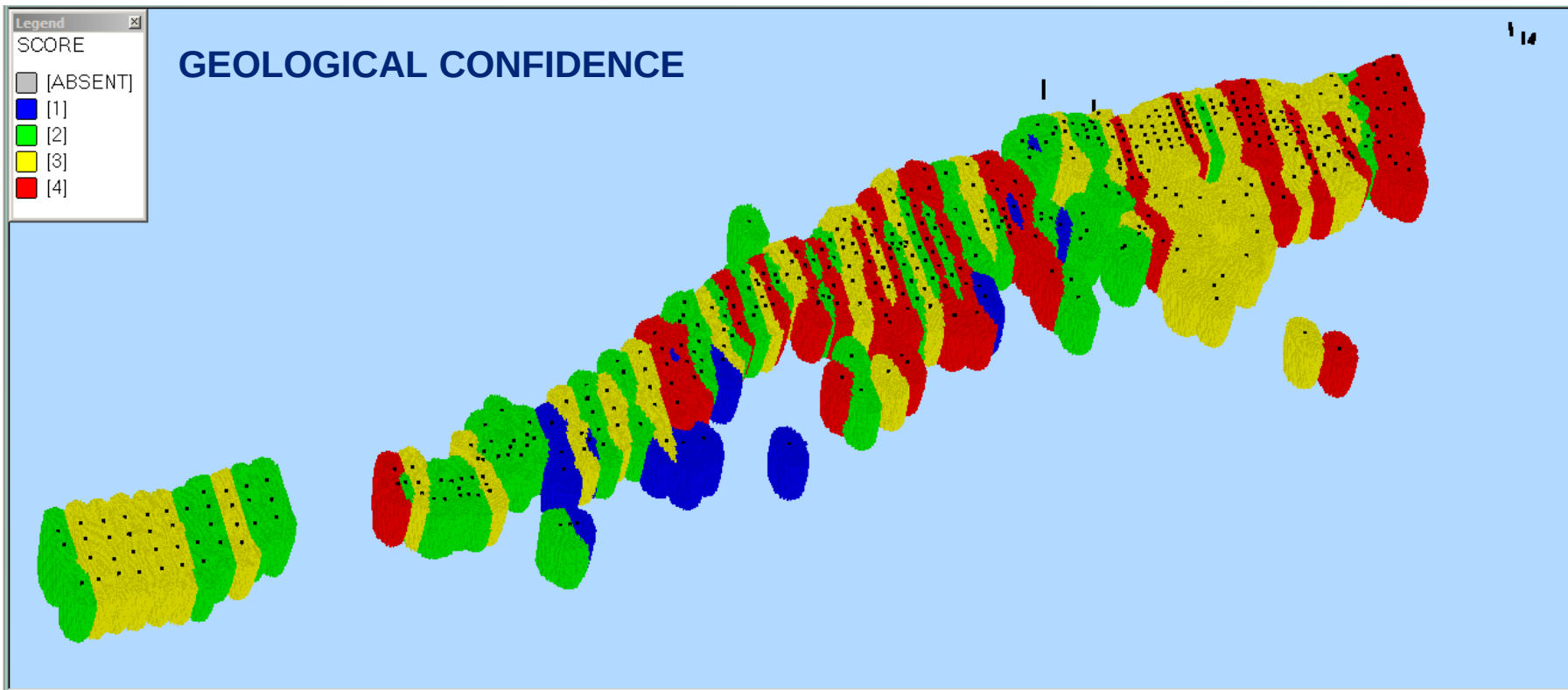
< 0.2	-	very low confidence	-	score 0
>= 0.2 – 0.5	-	low confidence	-	score 1
0.5 – 0.85	-	medium confidence	-	score 3
>=0.85	-	high confidence	-	score 5
- Scores for kriging quality – slope of regression (Fe and Al₂O₃ block estimations)

< 0.2	-	very low confidence	-	score 0
>= 0.2 – 0.5	-	low confidence	-	score 1
>=0.5 – 0.8	-	medium confidence	-	score 3
>=0.8	-	high confidence	-	score 5



- Final weighted scores

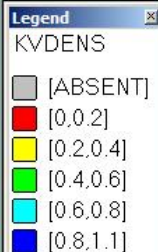
< 100	-	potential
>= 100 – 225	-	inferred resource
>= 225 – 325	-	indicated resource
>= 325 - 500	-	measured resource



DEZ 2011

ITEM	BASIS	WEIGHT (total=100)	SCORE BY DOMAIN (0-5)			WEIGHTED SCORE (0-500)		
			North	Center	South	North	Center	South
1. Geological Confidence								
1.1. Geological Understanding								
1.1.1. Geological Complexity								
1.1.2. Number of Drillholes in each section	Section by section	25	{0 to 5}	{0 to 5}	{0 to 5}	{0-125}	{0-125}	{0-125}

DENSITY

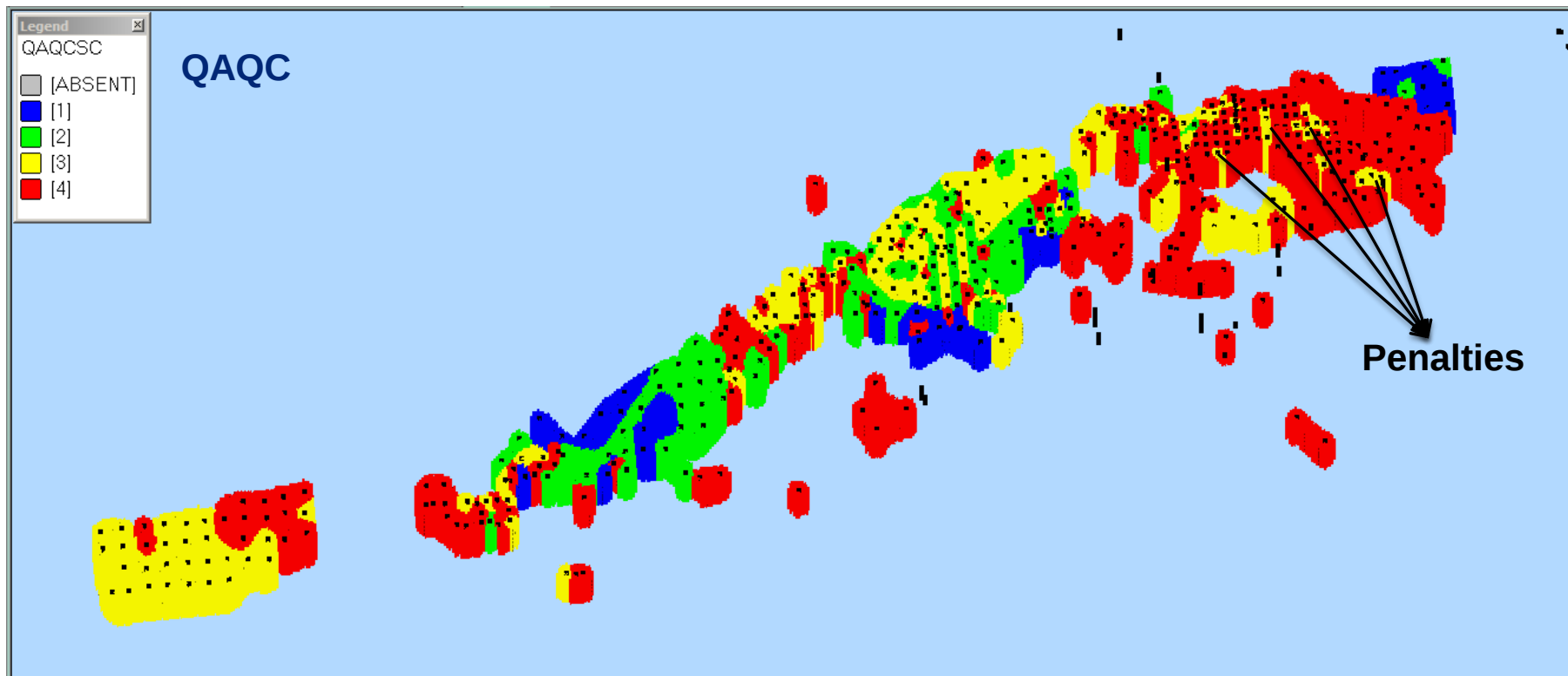


```

DENS KVAR = 1
IF (KVDENS <= 0.4)
DENS KVAR = 3
END
DENS CONF = DENS KVAR*20
  
```

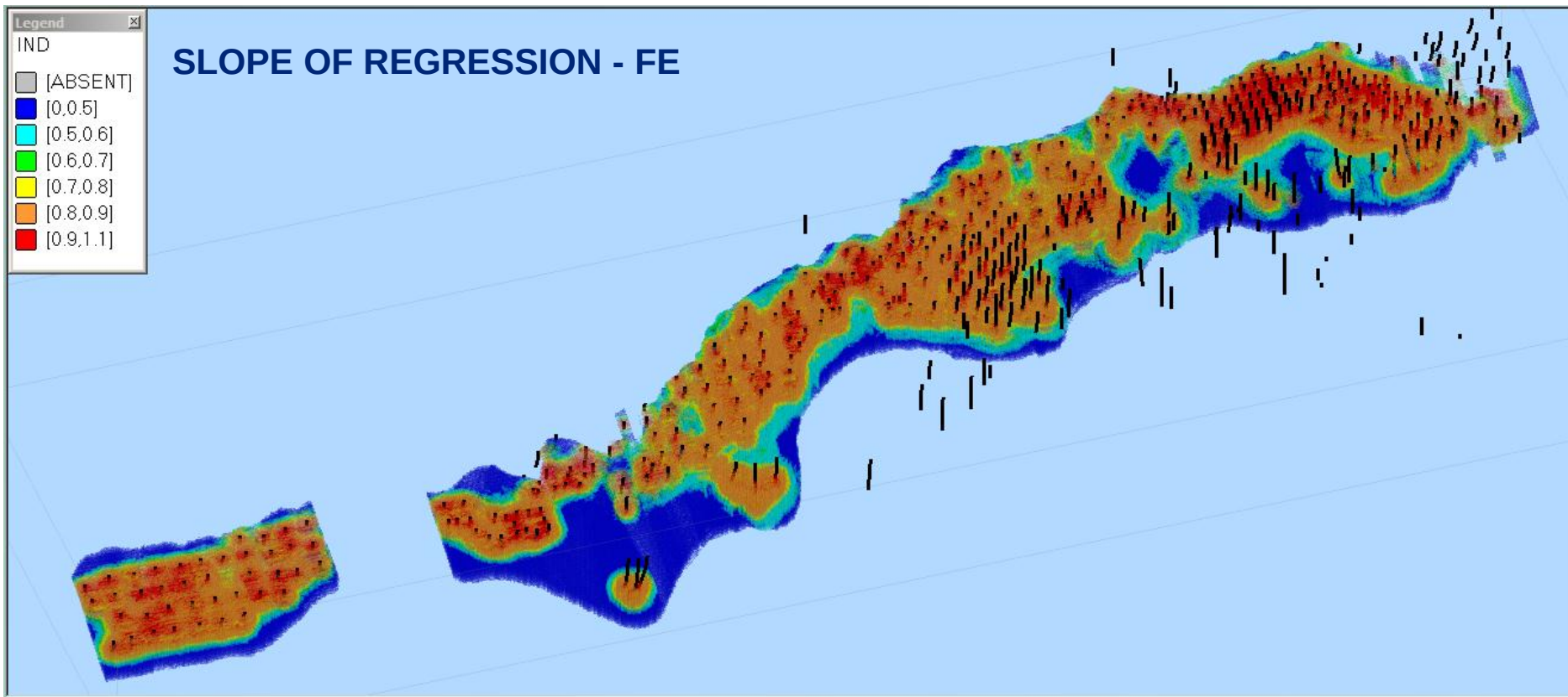
DEZ 2011

ITEM	BASIS	WEIGHT (total=100)	SCORE BY DOMAIN (0-5)			WEIGHTED SCORE (0-500)		
			North	Center	South	North	Center	South
2. Density/Tonnage Confidence	Block (KVDENS)	20	{0, 1, 3 or 5}	{0, 1, 3 or 5}	{0, 1, 3 or 5}	{0-100}	{0-100}	{0-100}



DEZ 2011

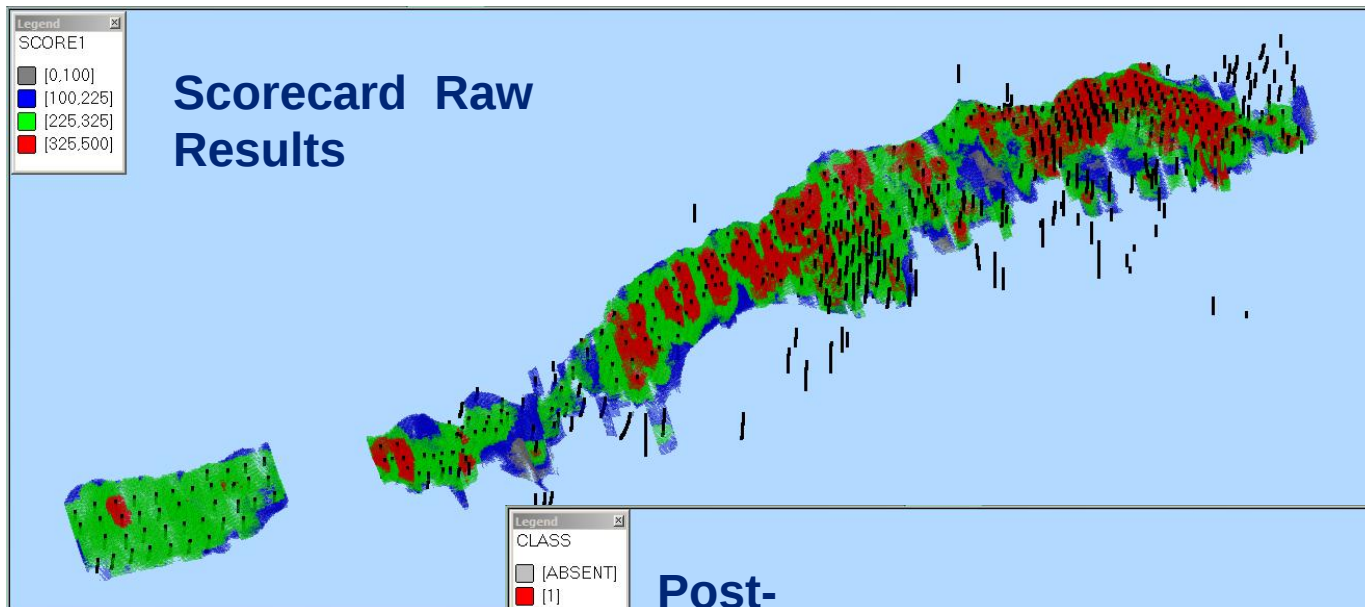
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3.2. Blank (DD 89- 190)			2	2	2	30	30	30
3.3. Blank + Duplicates (DD 191- 255)			3	3	3	45	45	45
3.4. Blank + Duplicates + 5CRMs (DD 256 - 381)			4	4	4	60	60	60
3.5. <i>Post Mortem</i>			{+1}	{+1}	{+1}	{+1}	{+1}	{+1}
3.6. <i>Failure in QAQC analysis (penalty)</i>			{-1}	{-1}	{-1}	{-1}	{-1}	{-1}



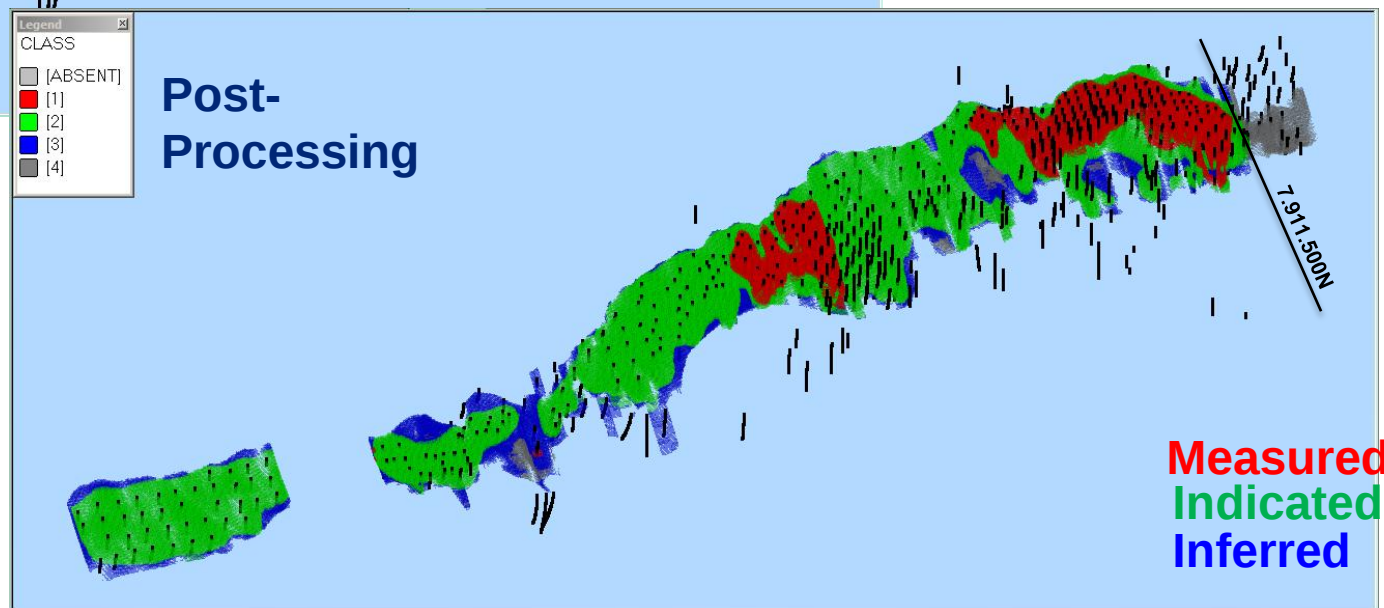
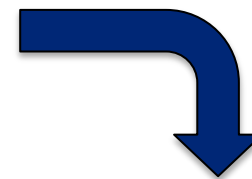
Serra do Sapo Scorecard System - DEC-2011

ITEM	BASIS	WEIGHT (total=100)	SCORE BY DOMAIN (0-5)			WEIGHTED SCORE (0-500)		
			North	Center	South	North	Center	South
4.2. Kriging Quality - Slope of Regression								
4.2.1. FE	Block	7	{0, 1, 3 or 5}	{0, 1, 3 or 5}	{0, 1, 3 or 5}	{0-35}	{0-35}	{0-35}
4.2.2. AL		3	{0, 1, 3 or 5}	{0, 1, 3 or 5}	{0, 1, 3 or 5}	{0-15}	{0-15}	{0-15}

FINAL MINERAL RESOURCES CLASSIFICATION – FRIABLE ORE



Knowledge
Driven
Intervention

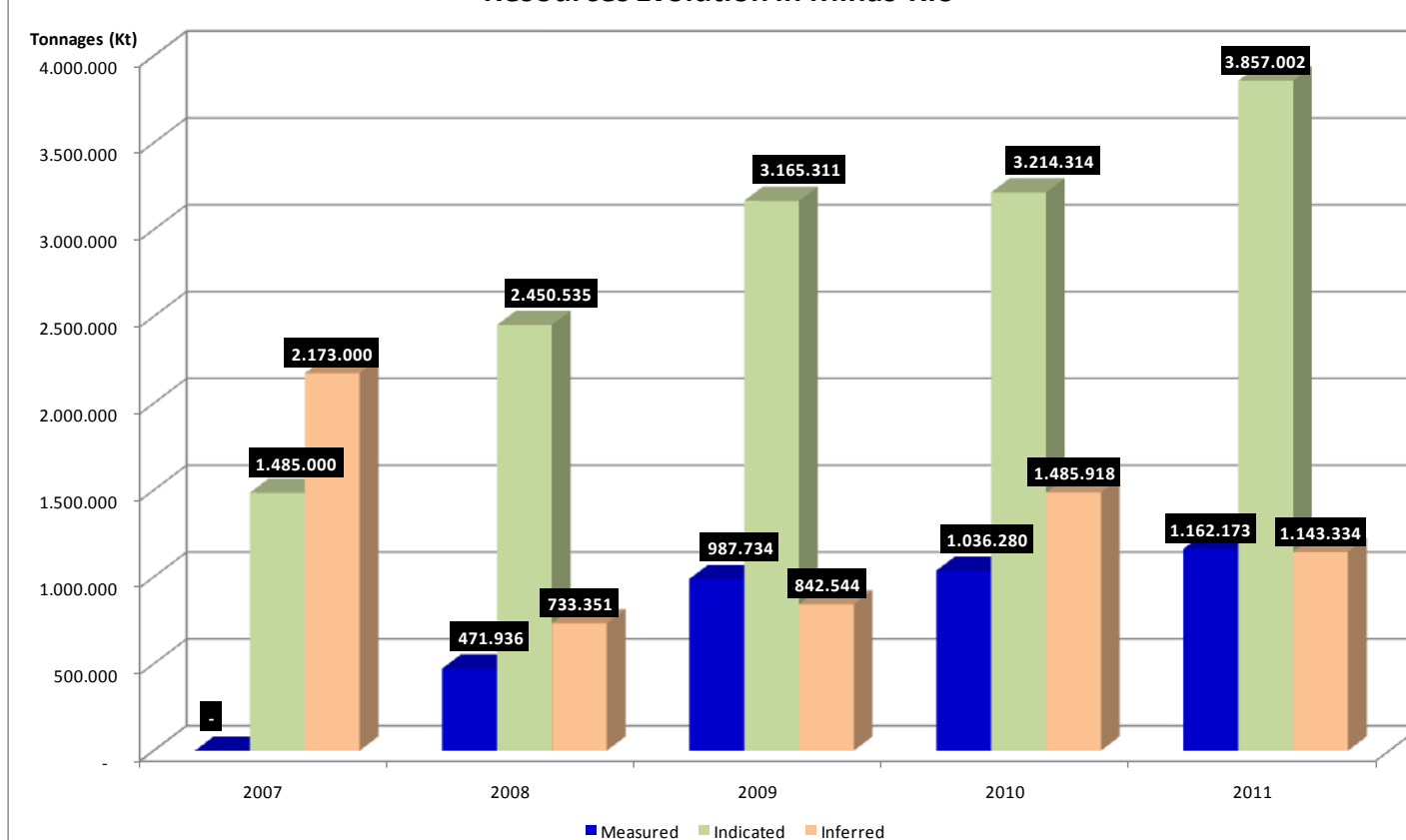


MINERAL RESOURCES

Minas Rio Project - Mineral Resources Evolution

Classification	Serra do Sapo (Tonnes - Kt)					Itapanhoacanga (Tonnes - Kt)					Serro (Tonnes - Kt)					Total (Tonnes - Kt)				
	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011
Measured		471.936	951.842	1.000.388	1.126.281	-	-	35.892	35.892	35.892	-	-	-	-	-	-	471.936	987.734	1.036.280	1.162.173
Indicated	1.270.000	2.235.535	2.840.752	2.889.755	3.532.443	89.000	89.000	315.072	315.072	315.072	126.000	126.000	9.487	9.487	9.487	1.485.000	2.450.535	3.165.311	3.214.314	3.857.002
Inferred	1.448.000	835.100	341.593	984.967	642.383	413.000	413.000	118.601	118.601	118.601	312.000	312.000	382.350	382.350	382.350	2.173.000	1.560.100	842.544	1.485.918	1.143.334
Total	2.718.000	3.542.571	4.134.187	4.875.110	5.301.107	502.000	502.000	469.565	469.565	469.565	438.000	438.000	391.837	391.837	391.837	3.658.000	4.482.571	4.995.589	5.736.512	6.162.509

Resources Evolution in Minas-Rio



In August 2008
Anglo American
Acquired 100 % of
Minas Rio Project
from MMX



MINING PLANNING

The Minas-Rio Project was originally projected into 2 phases :

Phase I → Friable Ores

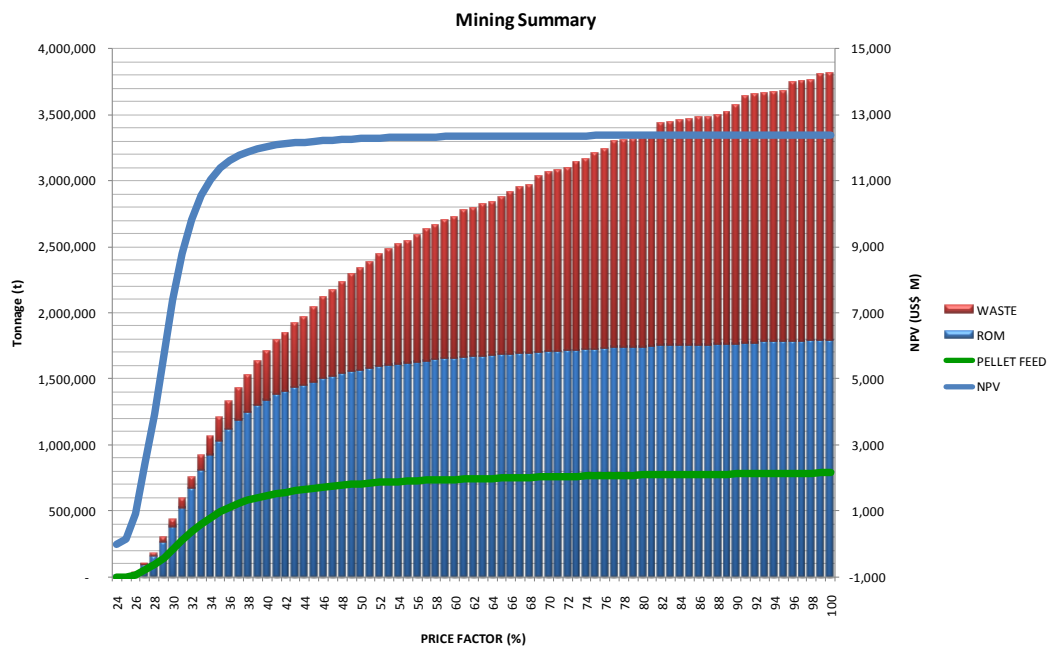
Phase II → Compact Ores

For the Phase I was planned to mine only the Serra do Sapo, aiming to produce 26.5 Mtpa of pellet feed. However, after several studies, it was identified the possibility to increase the pipeline capacity, and consequently increasing to 29.8 Mtpa the pellet feed production (Optimized Phase I).

The studies took as a premise, to transport the ore using trucks till the crushers, which would be installed on the north, central and south mine portions. Associated to the crusher would have a long distance conveyor belt to transport the ore to the beneficiation plant. Also the waste would be transported by trucks to the piles.

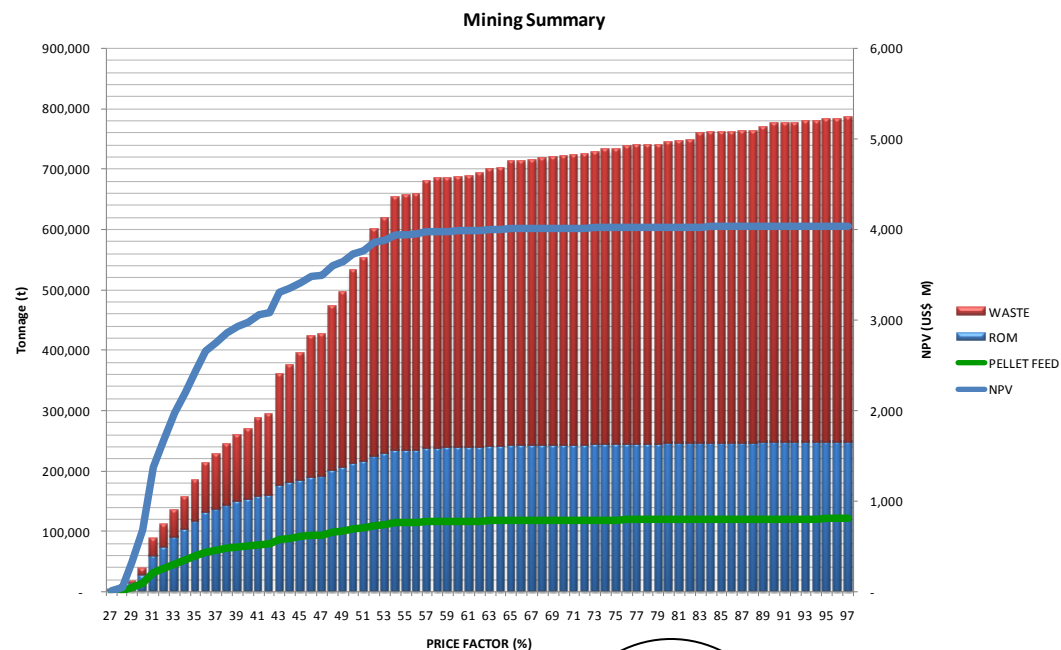
MINE PLAN – MAIN RESULTS

SERRA DO SAPO - Pit Family Analysis



PIT ANALYSIS	PIT		DIFFERENCE (A-B)	MINED 1- ((A-B)/A)
	ULTIMATE PIT (A)	SELECTED PIT (B)		
PIT (#)	100	75	-	-
NPV (US\$ M)	12,372	12,363	9	100%
Total ROM (Kt)	1,788,504	1,727,486	61,019	97%
Total Waste (Kt)	2,020,723	1,480,580	540,143	73%
S.R (t/t)	1.13	0.86	0.27	
Remaining Stripping Ratio (t/t)			8.85	

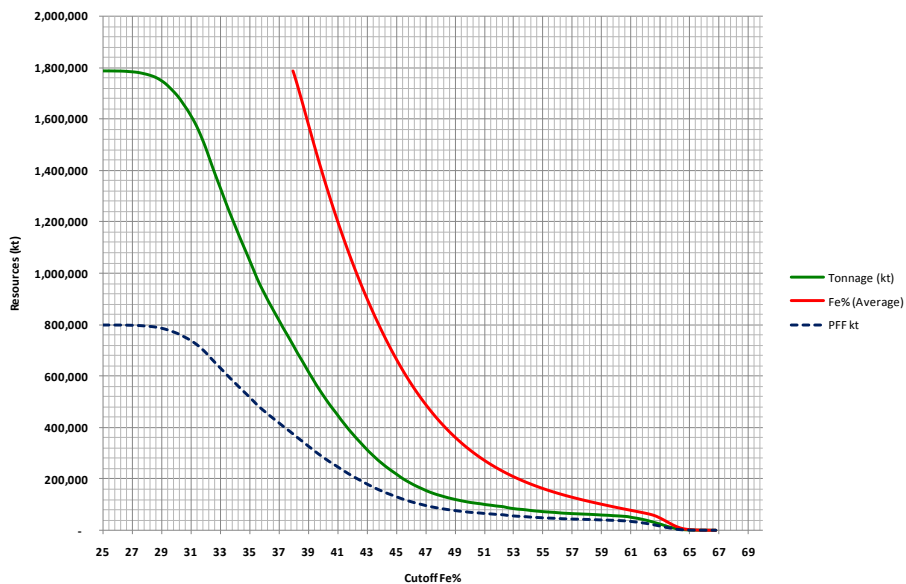
SERRA DE ITAPANHOACANGA - Pit Family Analysis



PIT ANALYSIS	PIT		DIFFERENCE (A-B)	MINED 1- ((A-B)/A)
	ULTIMATE PIT (A)	SELECTED PIT (B)		
PIT (#)	97	55	-	-
NPV (US\$ M)	4,033	3,944	89	98%
Total ROM (Kt)	248,389	234,071	14,319	94%
Total Waste (Kt)	535,341	421,575	113,767	79%
S.R (t/t)	2.16	1.80	0.35	
Remaining Stripping Ratio (t/t)		5.14	7.95	

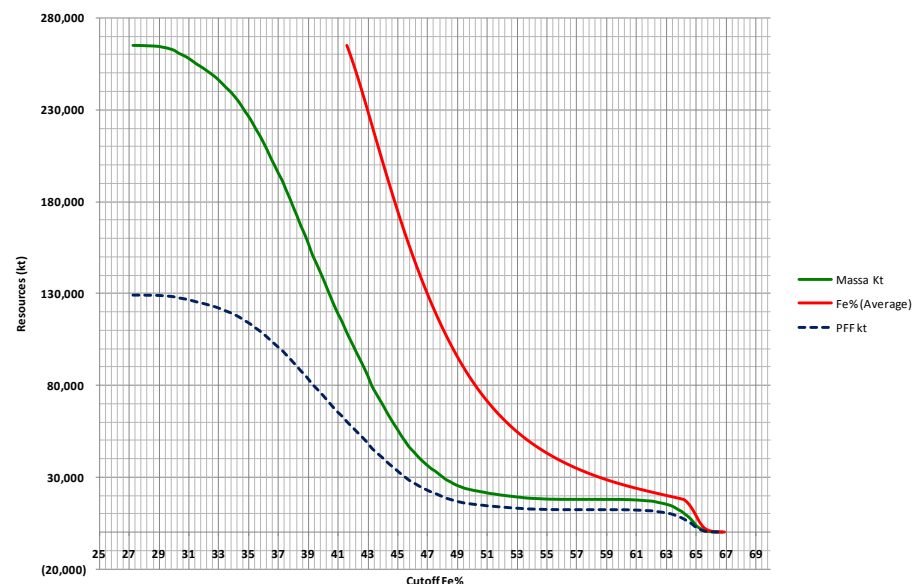
Grade Tonnage Curve

Fe - Grade Tonnage Curve - Resources (Friable Ore)



Serra do Sapo

Fe - Grade Tonnage Curve - Resources (Friable Ore)



Itapanhoacanga

- Serra do Sapo Reserve (operational pit)

ORE LITHOLOGIES	TONNAGE (kt)	FE (%)	SI (%)	AL (%)	P (%)	MN (%)	LOI (%)
HM	34,884	62.82	6.24	2.16	0.041	0.04	1.35
IF	1,044,260	38.89	41.97	1.46	0.025	0.09	0.64
ISC	518,366	32.83	51.99	0.77	0.017	0.04	0.23
IFX	43,898	40.66	29.13	6.91	0.083	0.43	3.58
CG	62,512	55.46	10.40	3.87	0.133	0.14	5.61
TOTAL	1,703,920	38.19	42.80	1.49	0.028	0.08	0.78

WASTE	TONNAGE (kt)
WASTE	1,590,910
TOTAL	1,590,910

STRIP RATIO (t/t)	0.93
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- Itapanhoacanga Reserve (operational pit)

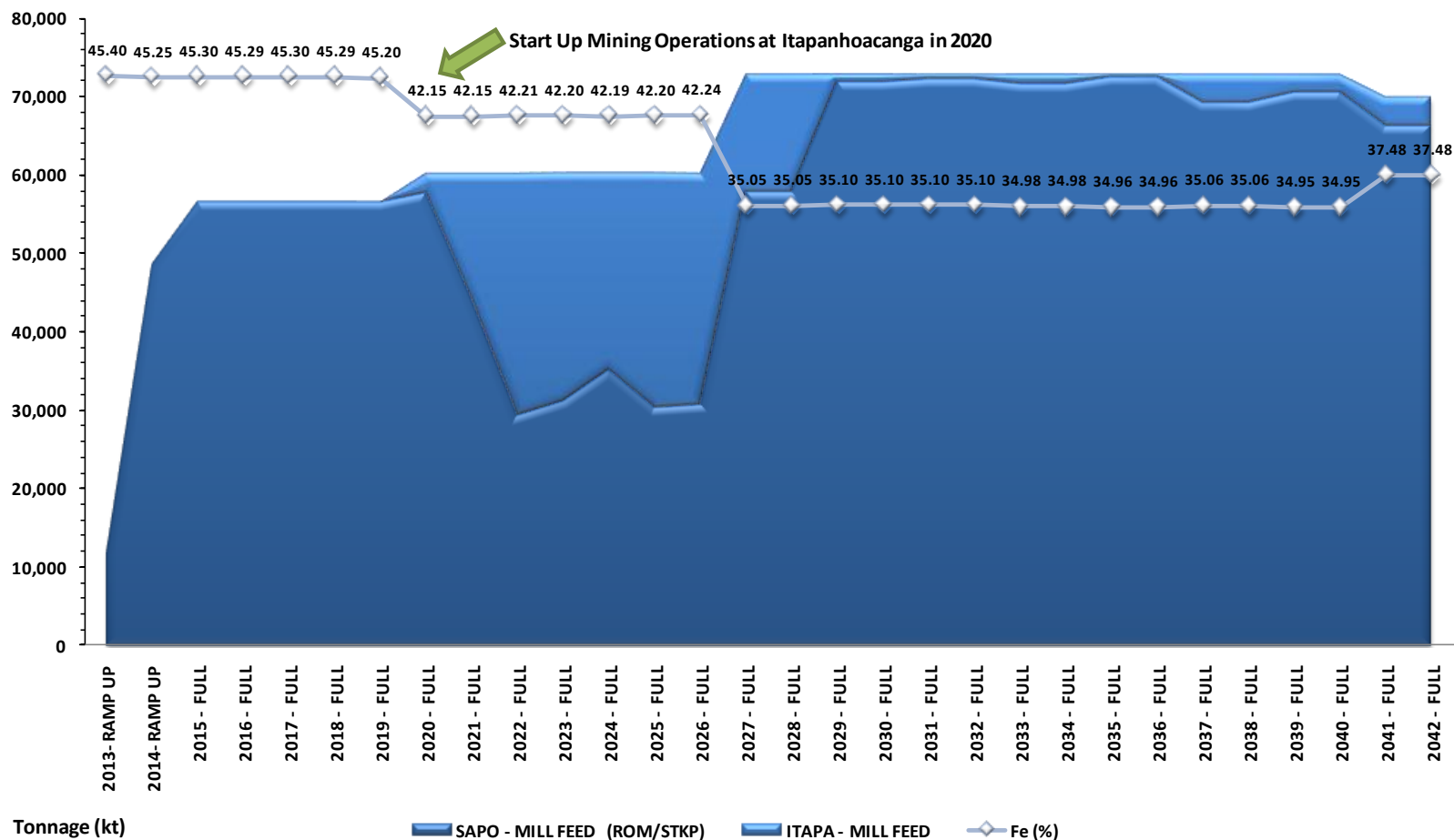
ORE LITHOLOGIES	TONNAGE (kt)	FE (%)	SI (%)	AL (%)	P (%)	MN (%)	LOI (%)
HD	2,584	62.87	7.54	1.02	0.025	0.43	0.62
HM	11,826	64.34	5.06	1.51	0.042	0.38	0.98
IF	157,159	41.09	38.25	1.77	0.030	0.21	0.87
ISC	47,892	37.54	44.02	1.38	0.022	0.16	0.59
TOTAL	219,462	41.83	37.36	1.66	0.028	0.21	0.81

WASTE	TONNAGE (kt)
ALL	401,772
TOTAL	401,772

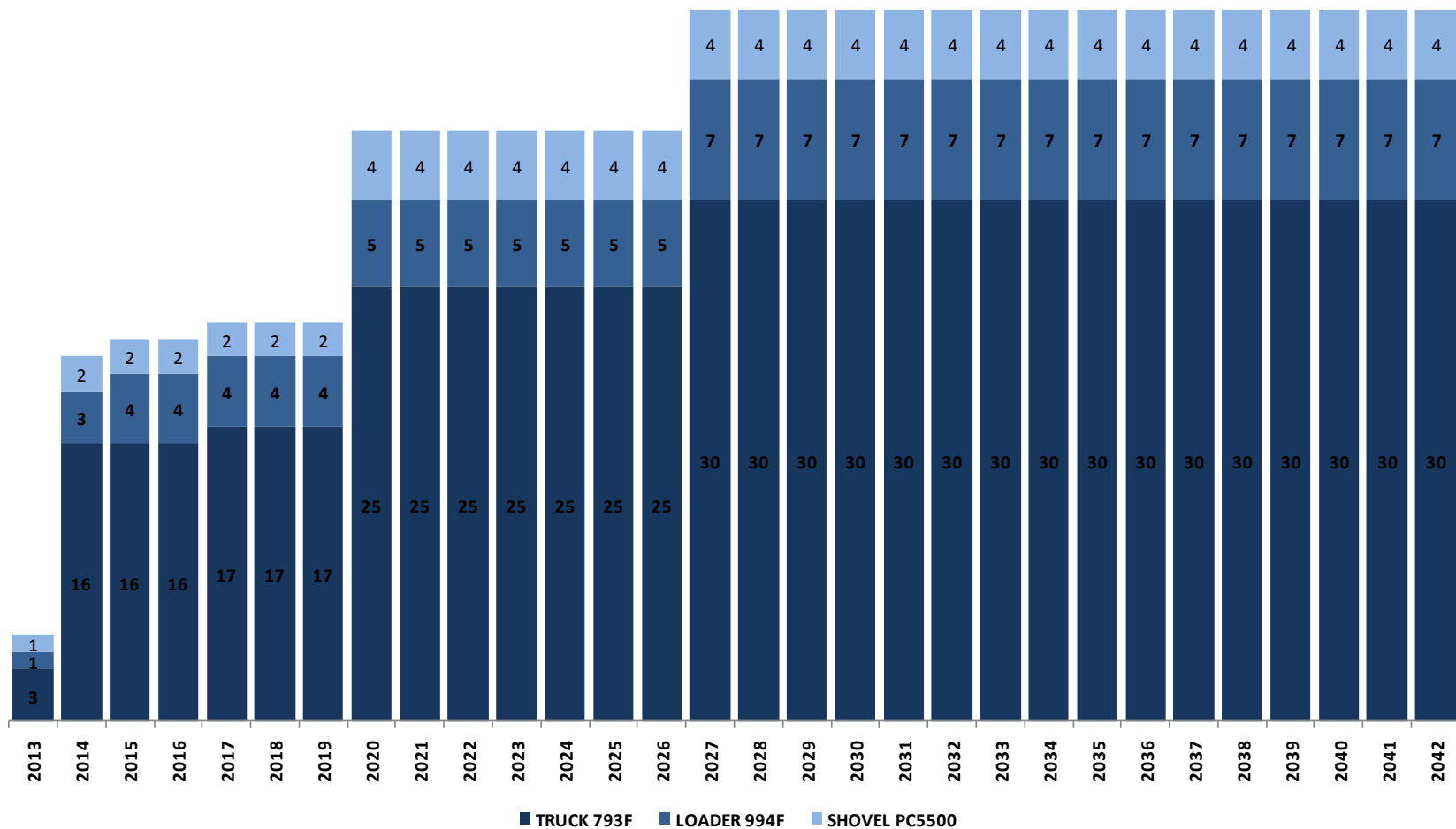
STRIP RATIO (t/t)	1.83
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ROM/Stockpile Schedule by Mine

Beneficiation Plant Feed

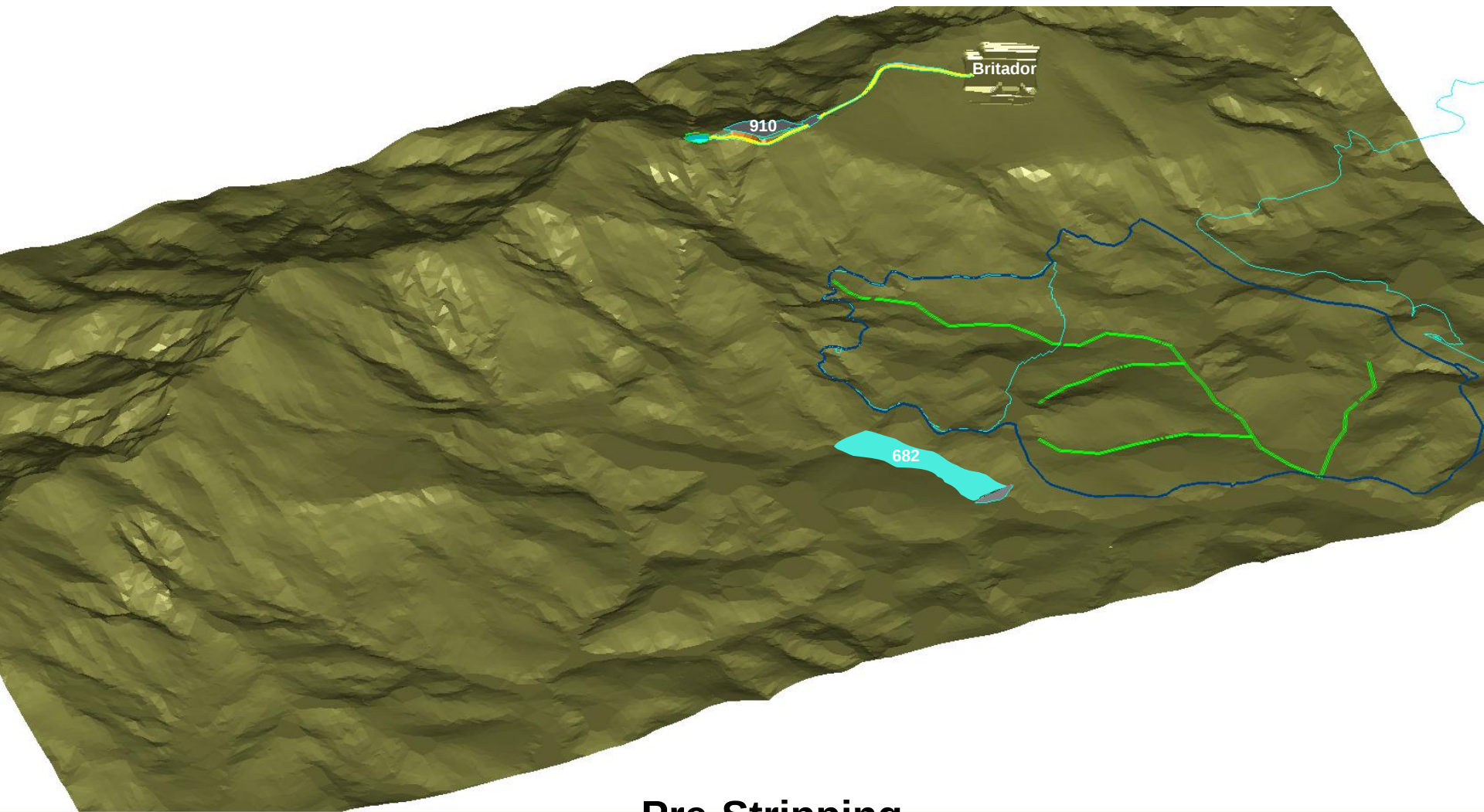


Main Equipament Required

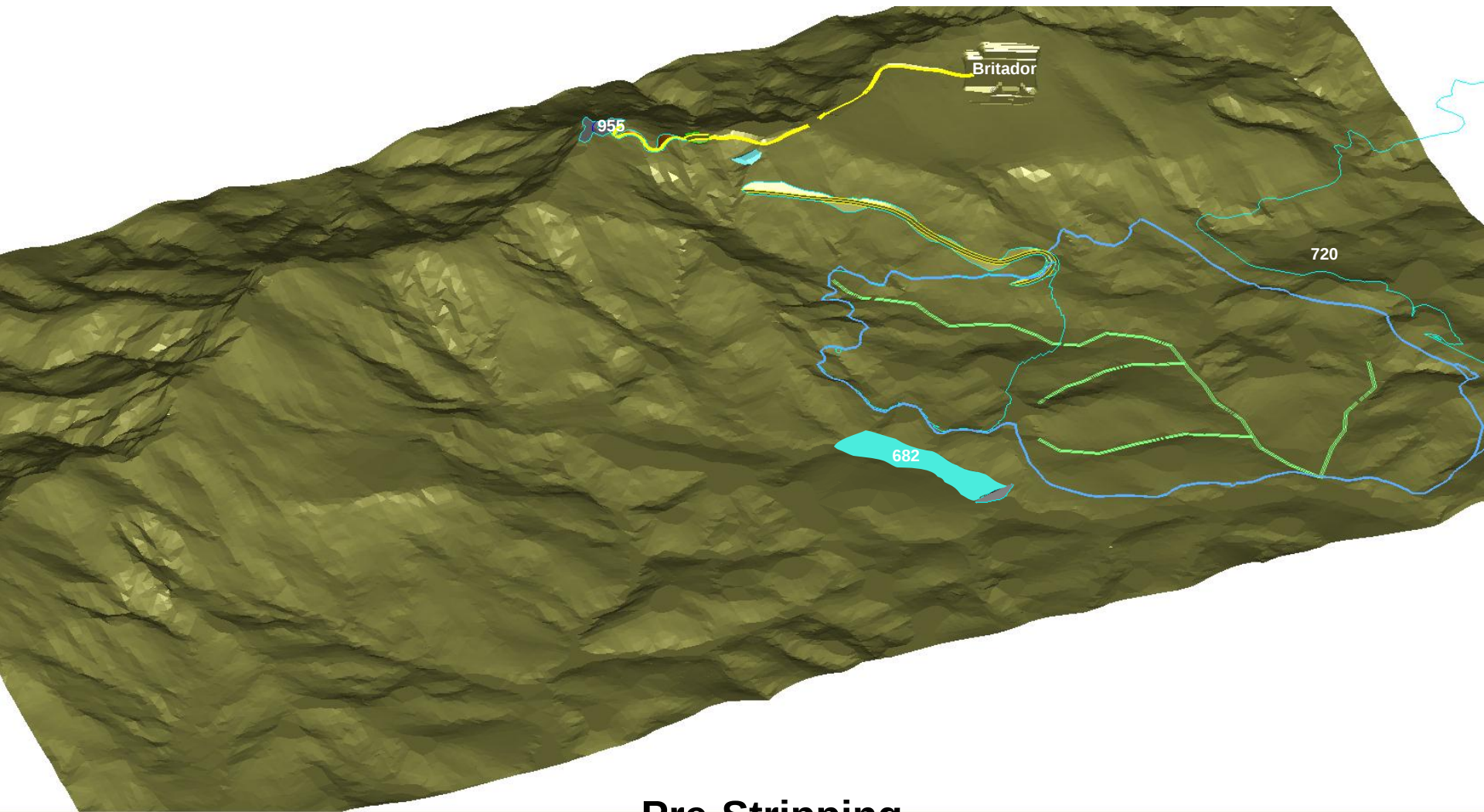


MINE SCHEDULING

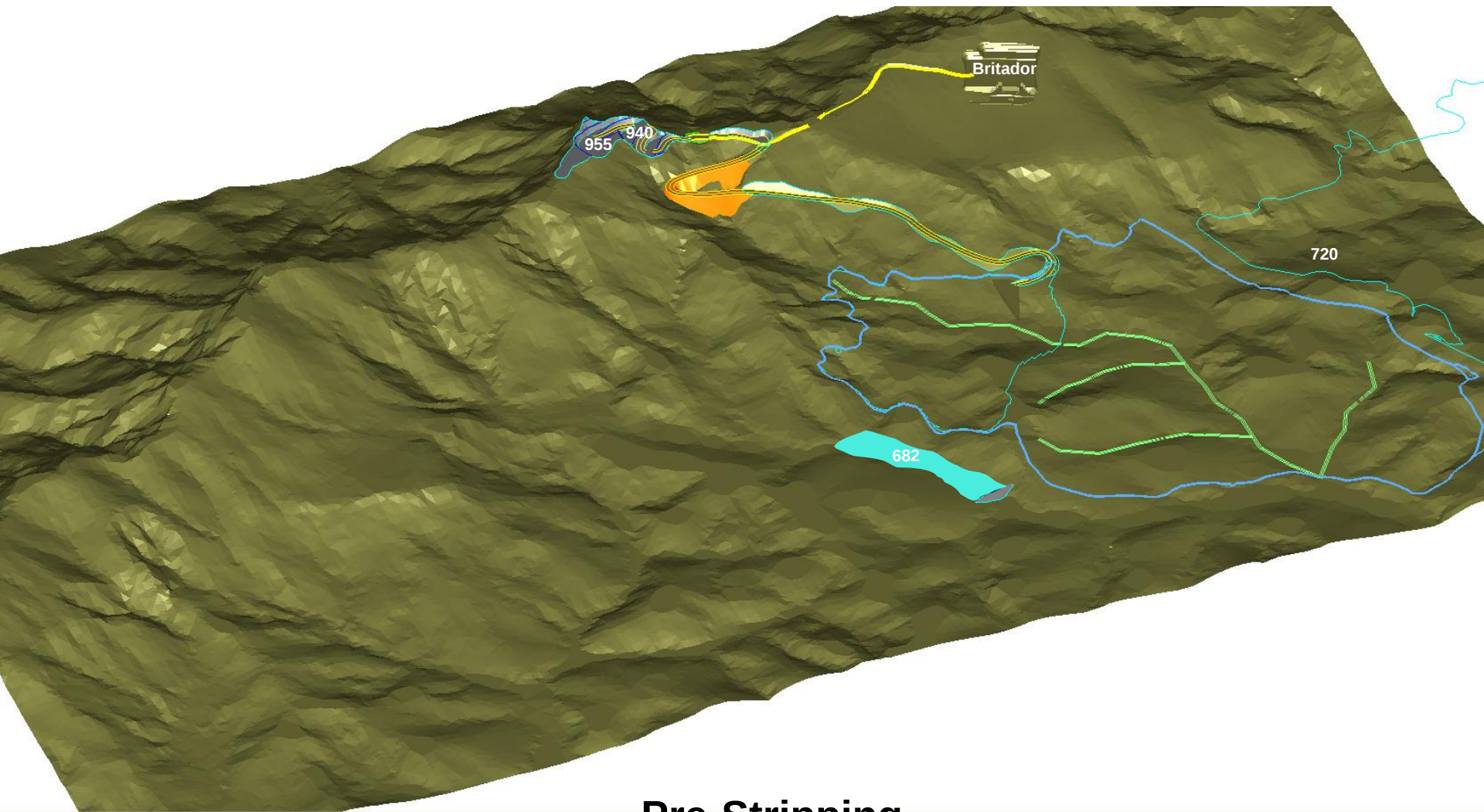




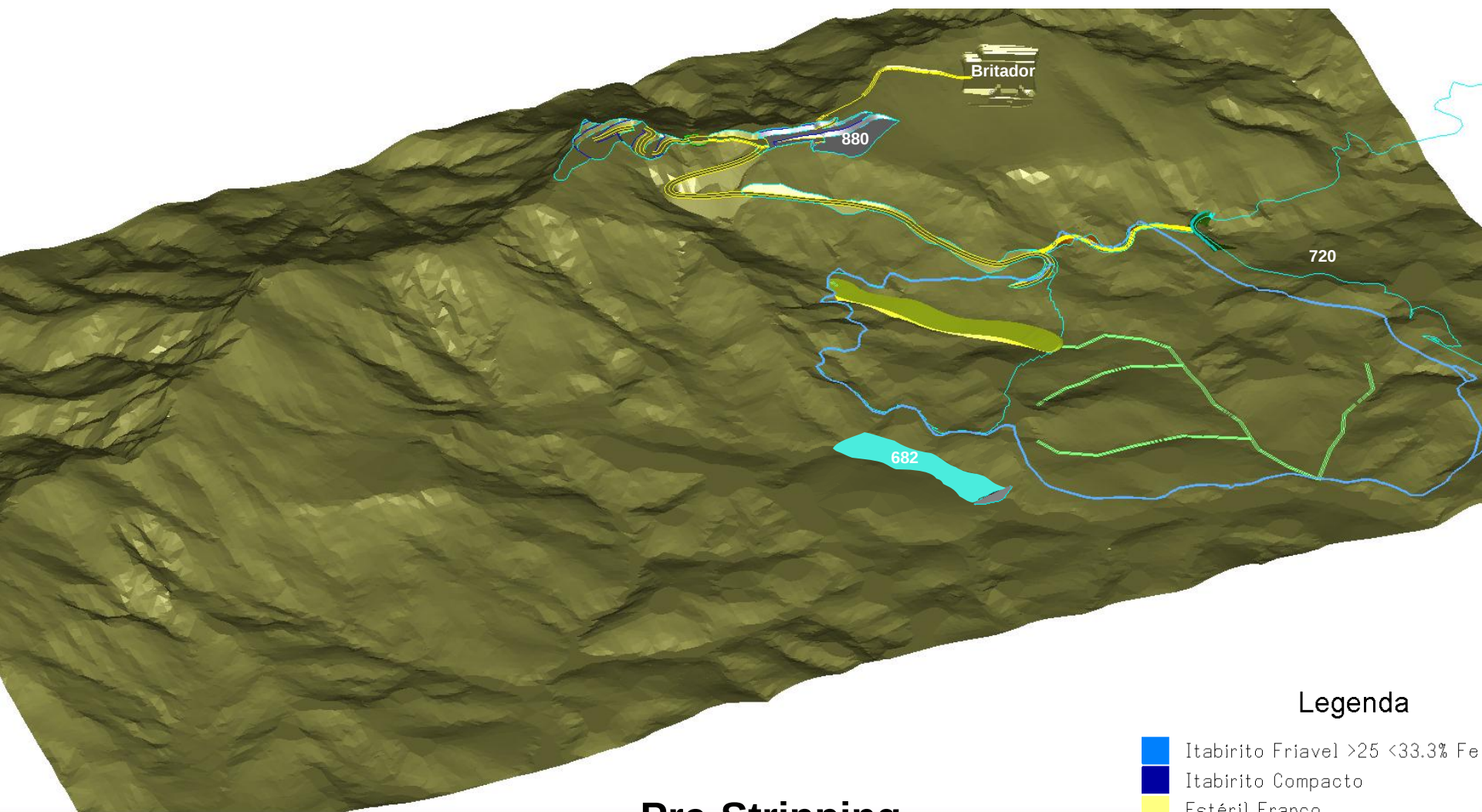
Pre-Stripping



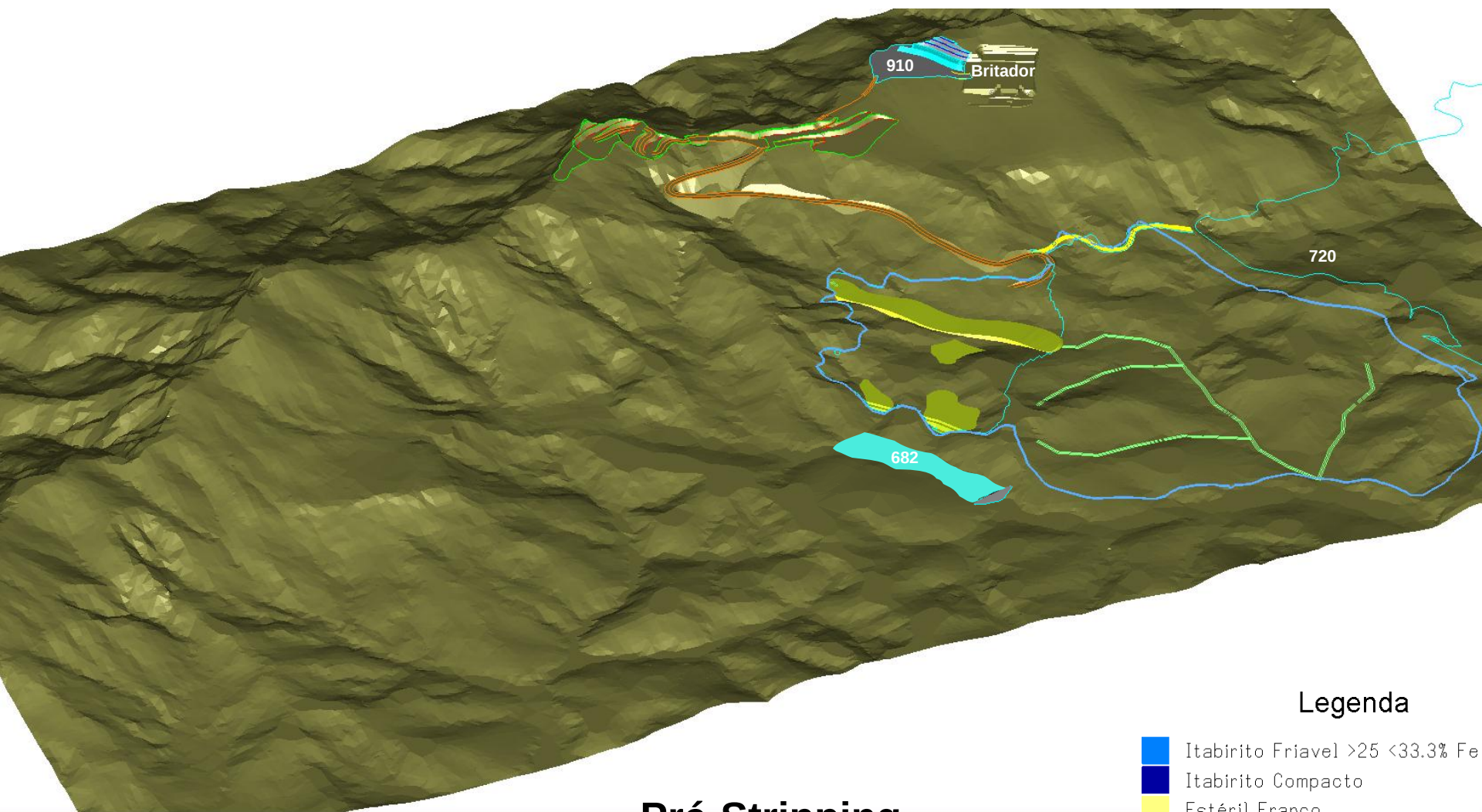
Pre-Stripping



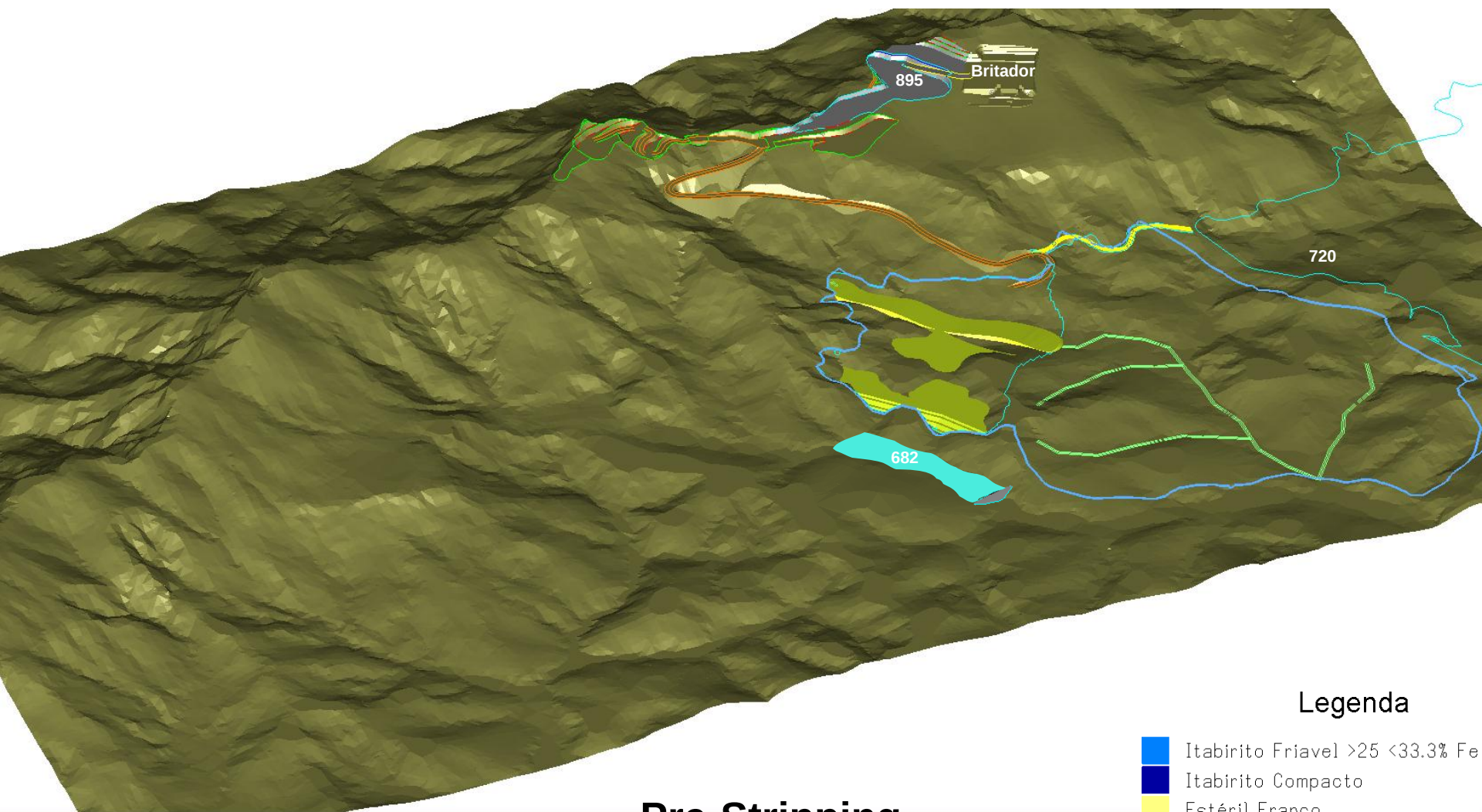
Pre-Stripping



Pre-Stripping

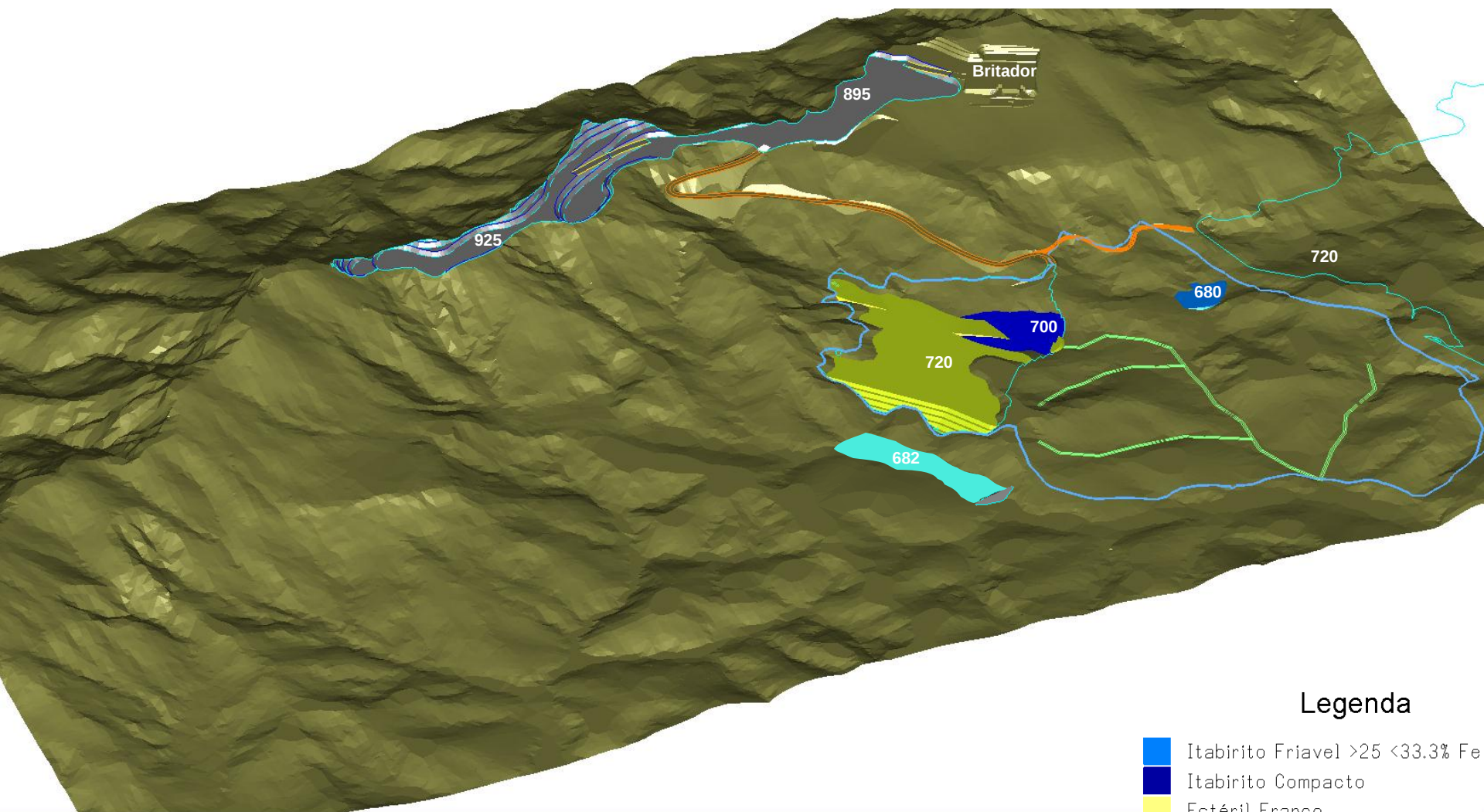


Pré-Stripping



Legenda

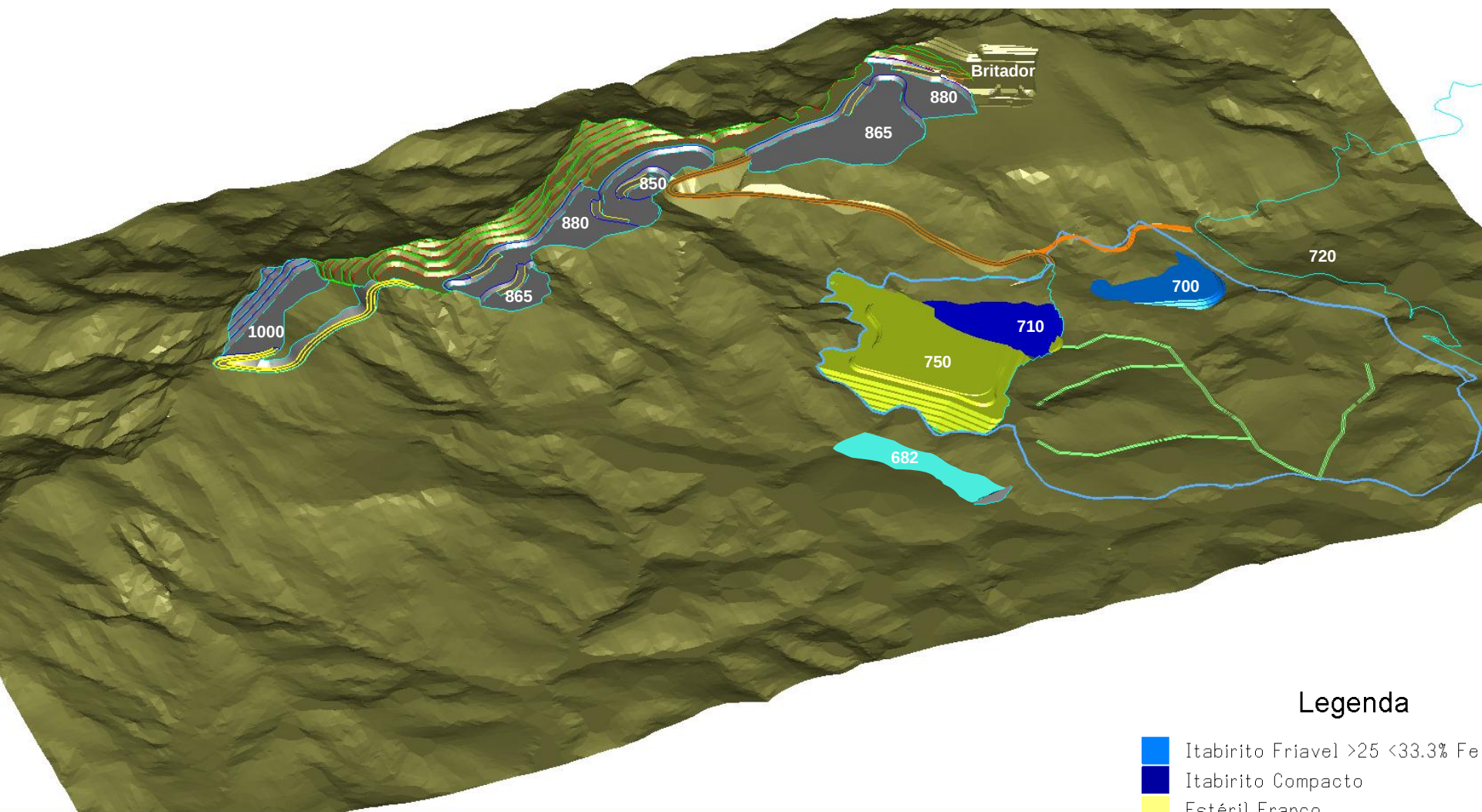
- Itabirito Friavel >25 <33.3% Fe
- Itabirito Compacto
- Estéril Franco



Legenda

-  Itabirito Friavel >25 <33.3% Fe
-  Itabirito Compacto
-  Estéril Franco

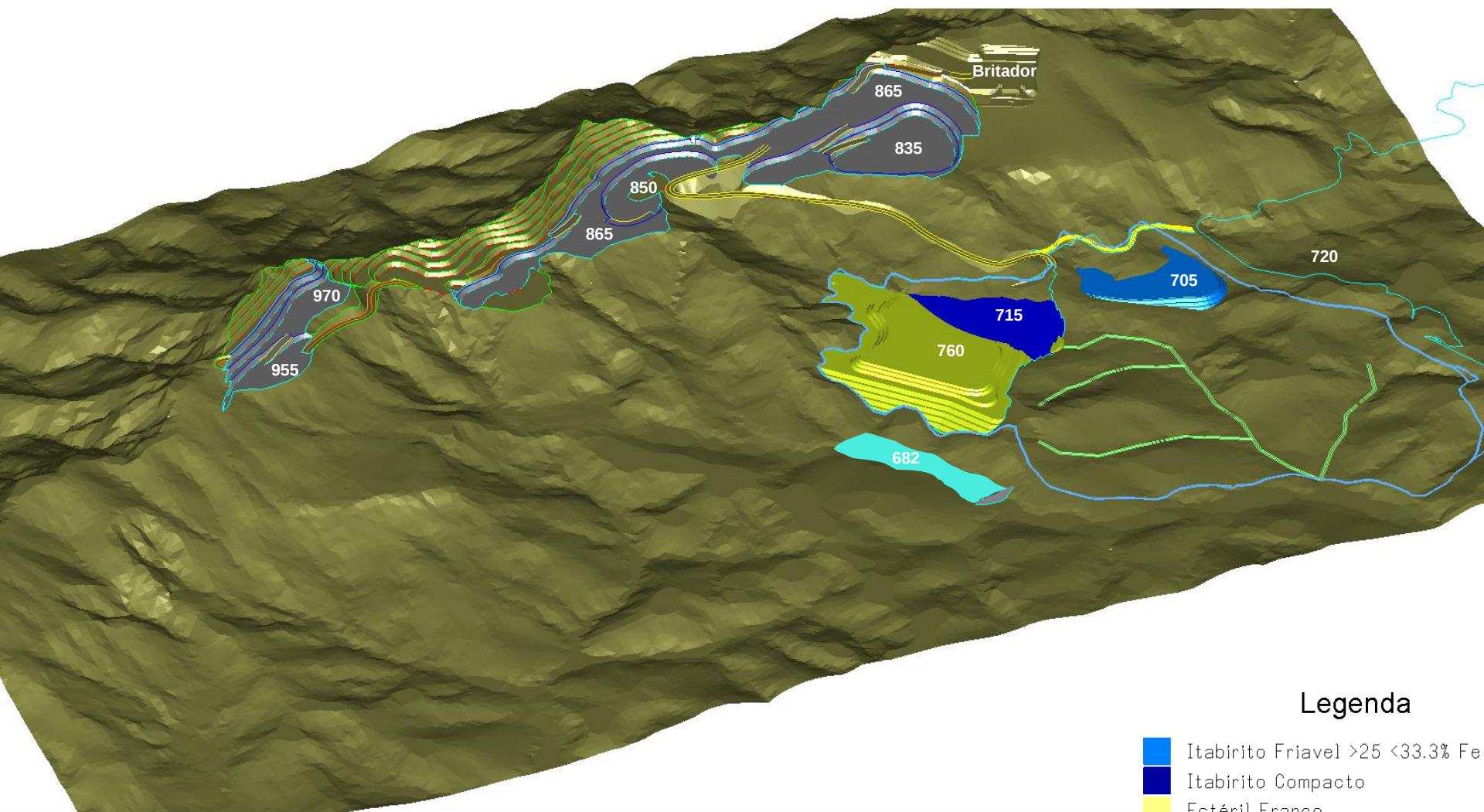
Ramp-up – 2nd Semester – Year 1



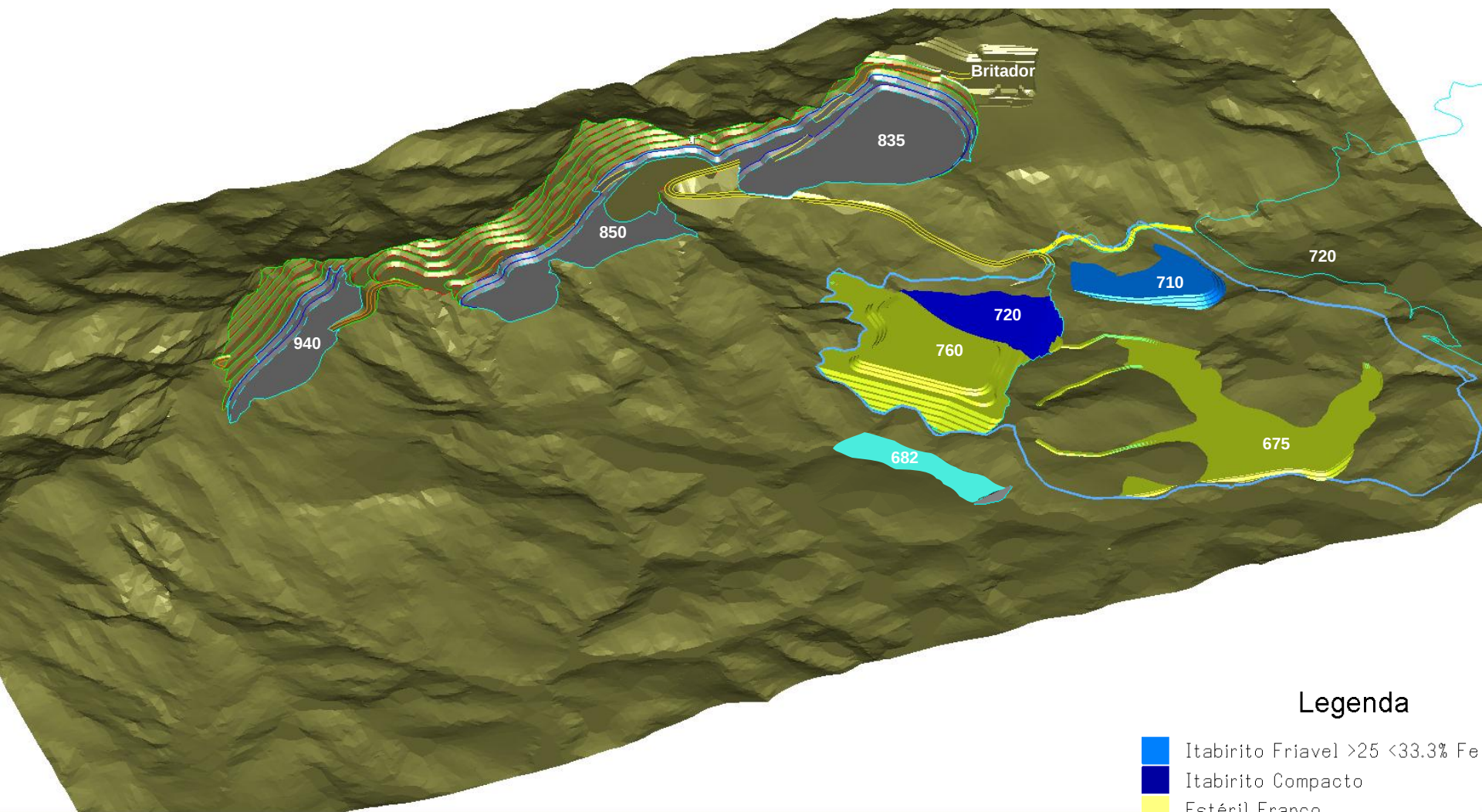
Legenda

-  Itabirito Friavel >25 <33.3% Fe
-  Itabirito Compacto
-  Estéril Franco

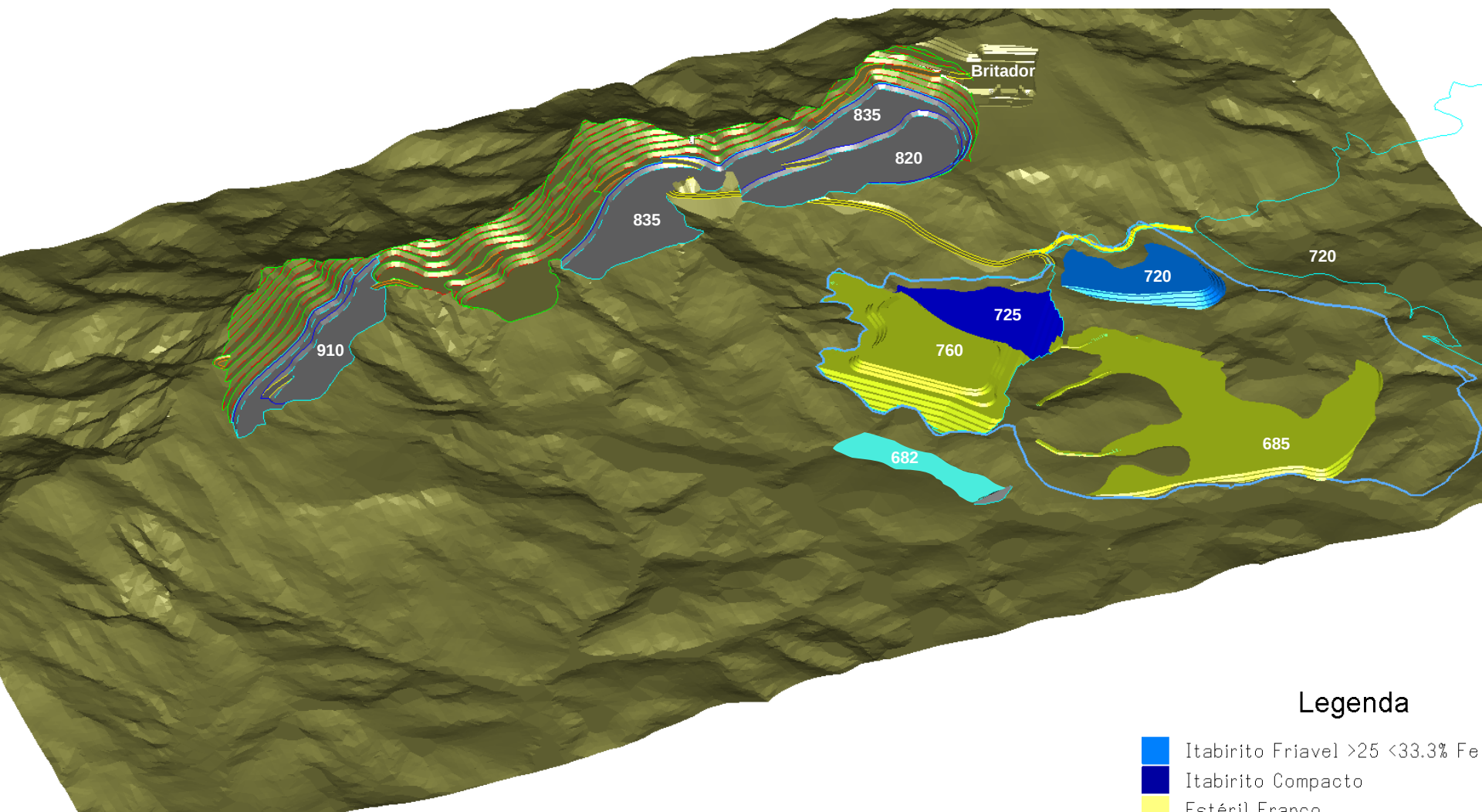
Ramp-up – 1st Semester – Year 2



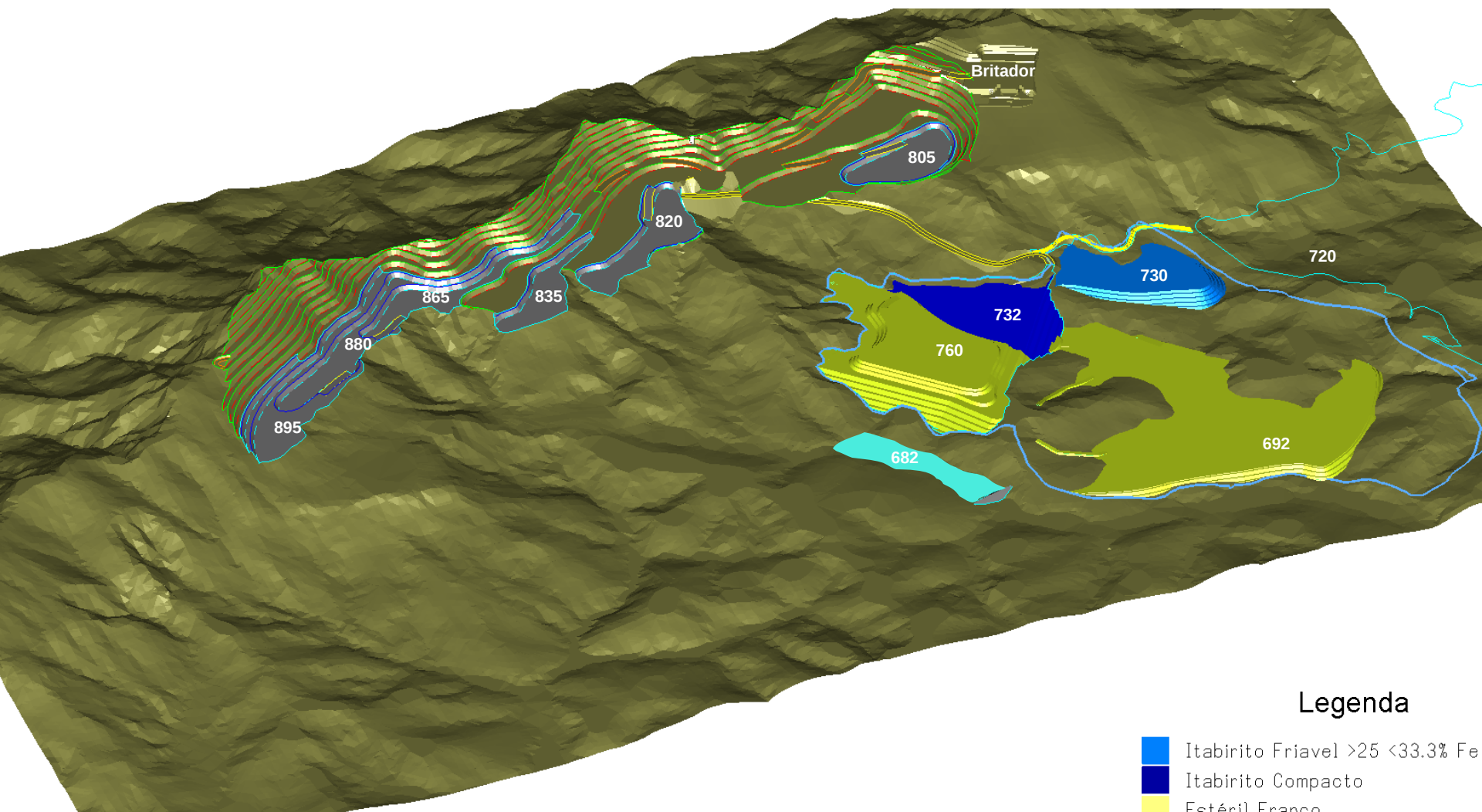
Ramp-up – 2nd Semester – Year 2



1st Semester –Year 3



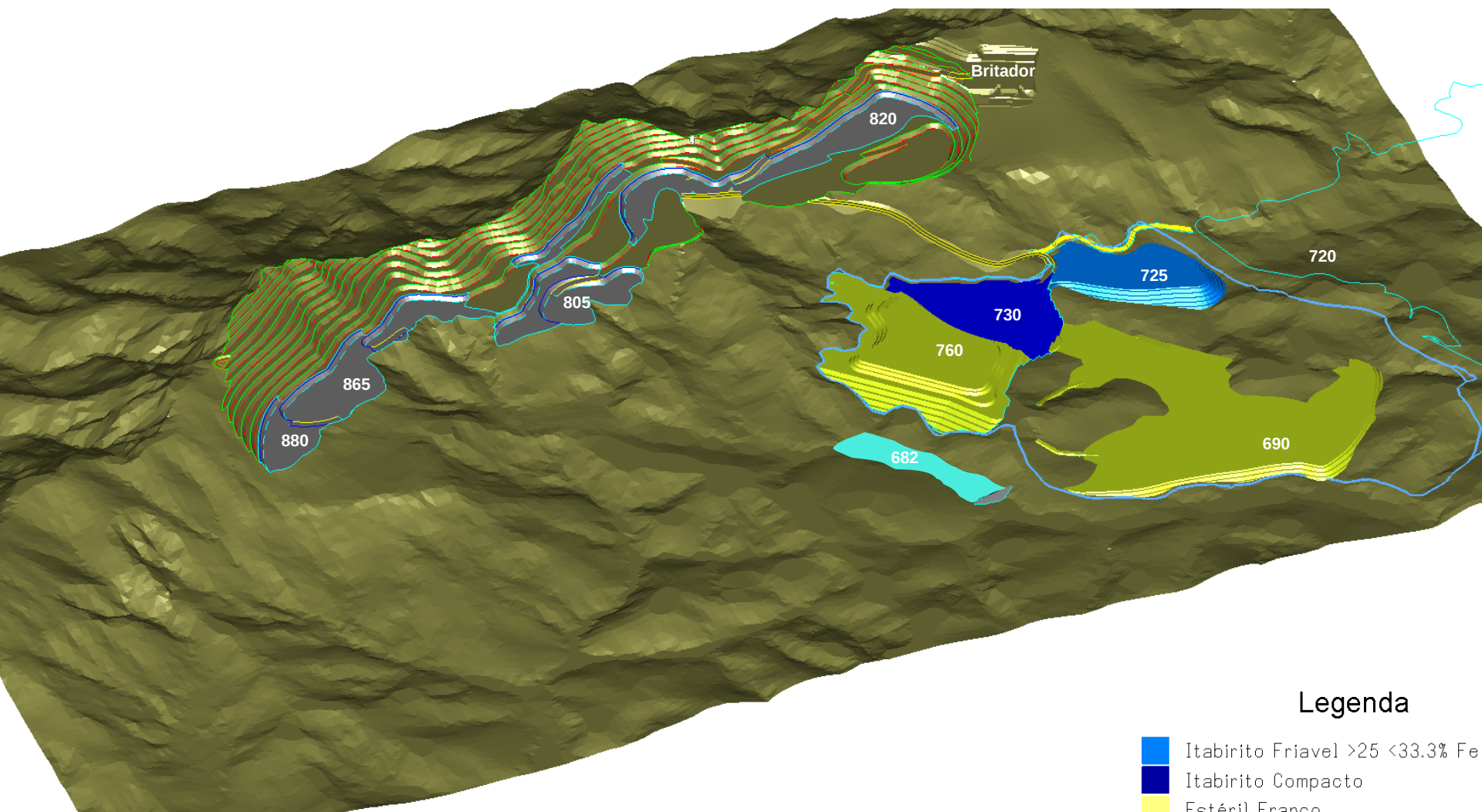
2nd Semester –Year 3



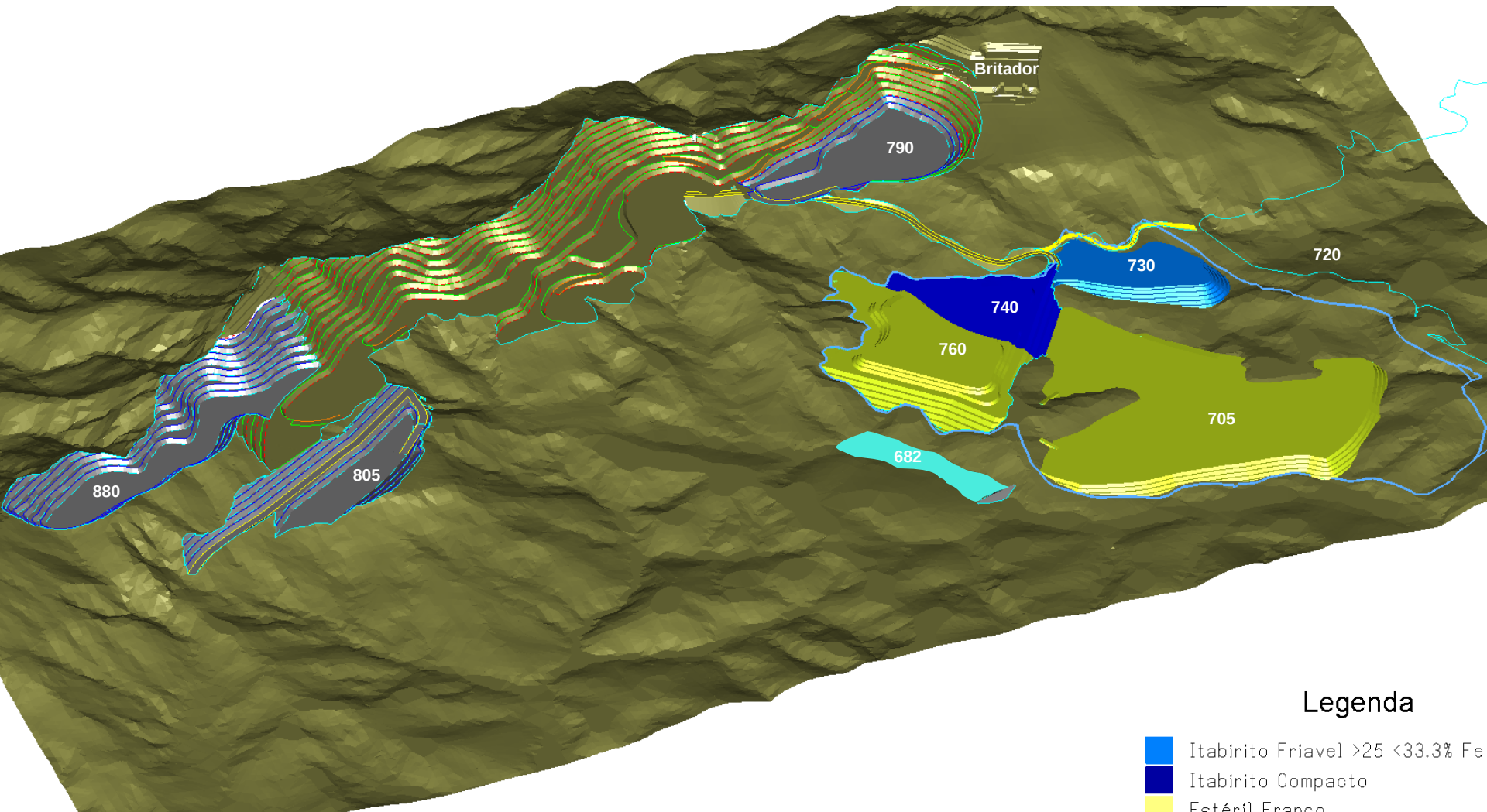
Legenda

- Itabirito Friavel >25 <33.3% Fe
- Itabirito Compacto
- Estéril Franco

1st Semester –Year 4



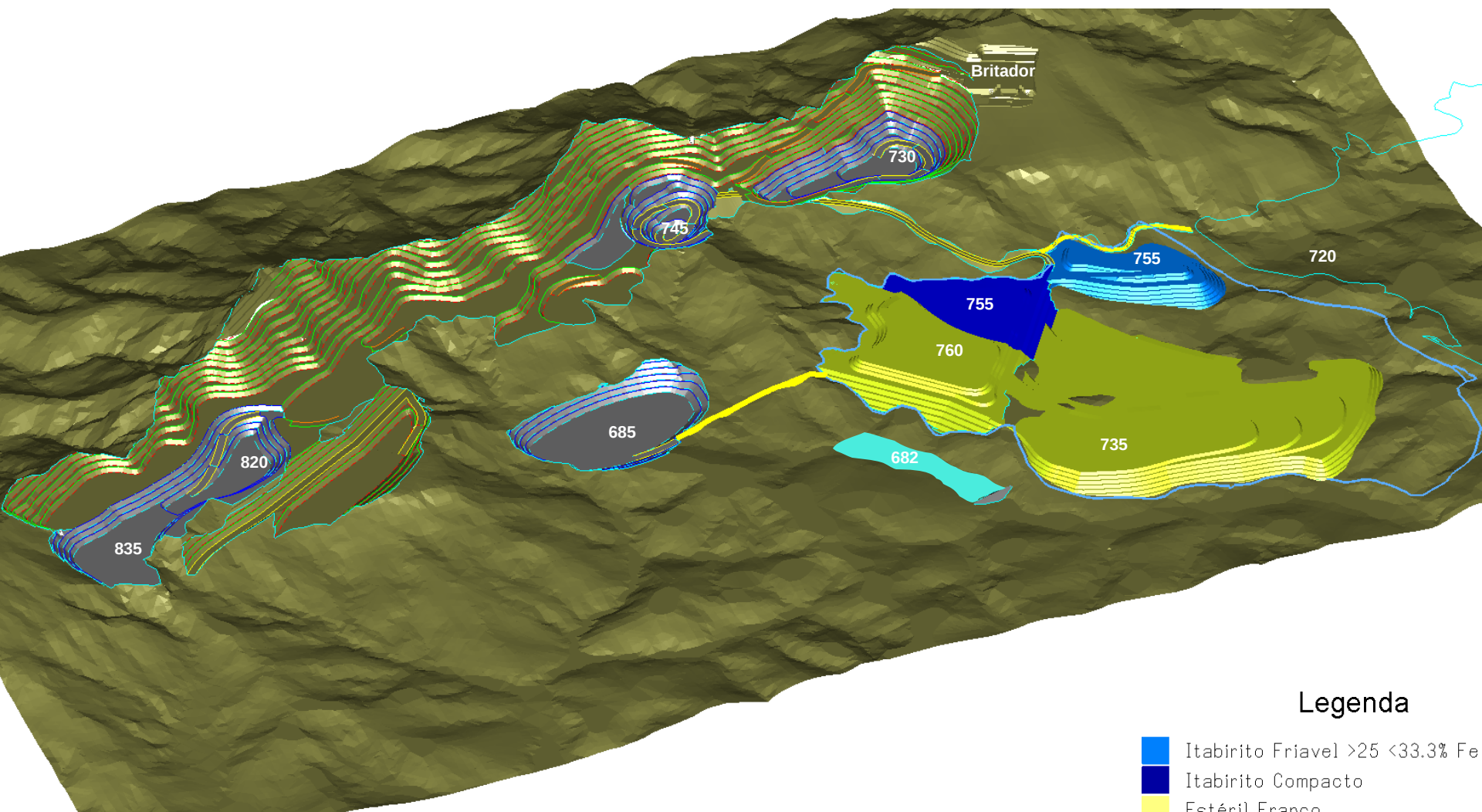
2nd Semester –Year 4



Legenda

-  Itabirito Friavel >25 <33.3% Fe
-  Itabirito Compacto
-  Estéril Franco

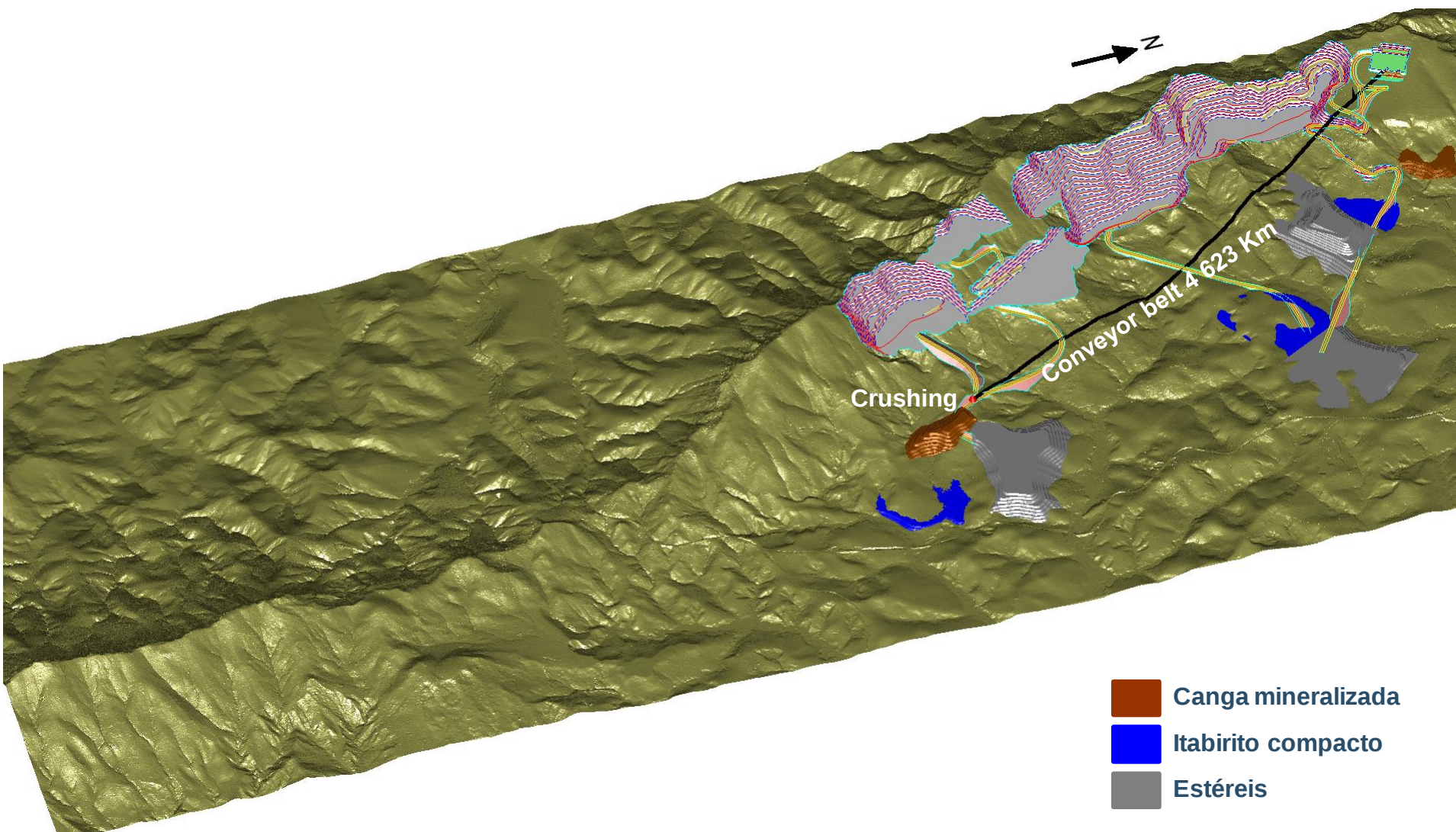
1st Semester –Year 5



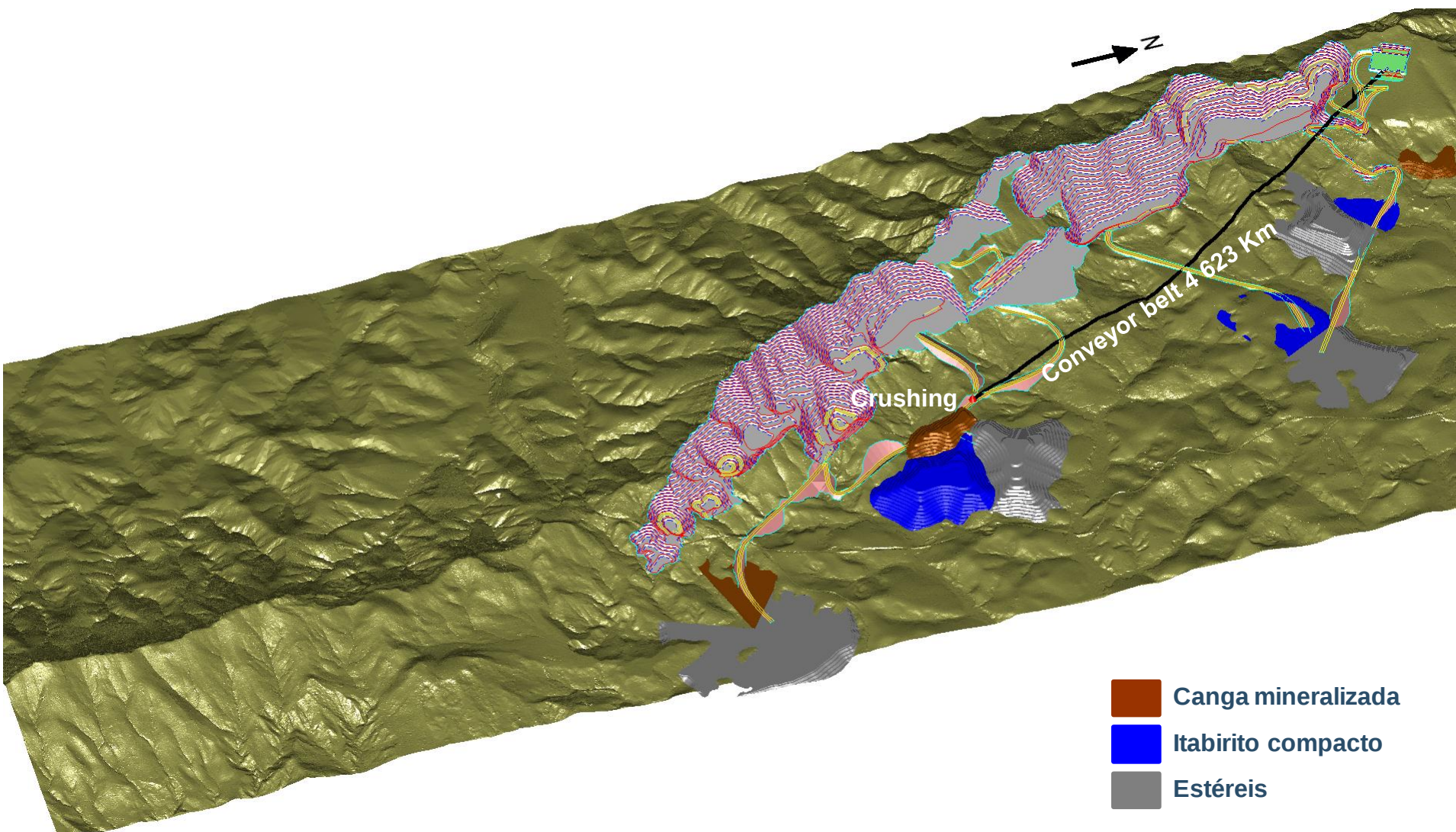
Legenda

-  Itabirito Friavel >25 <33.3% Fe
-  Itabirito Compacto
-  Estéril Franco

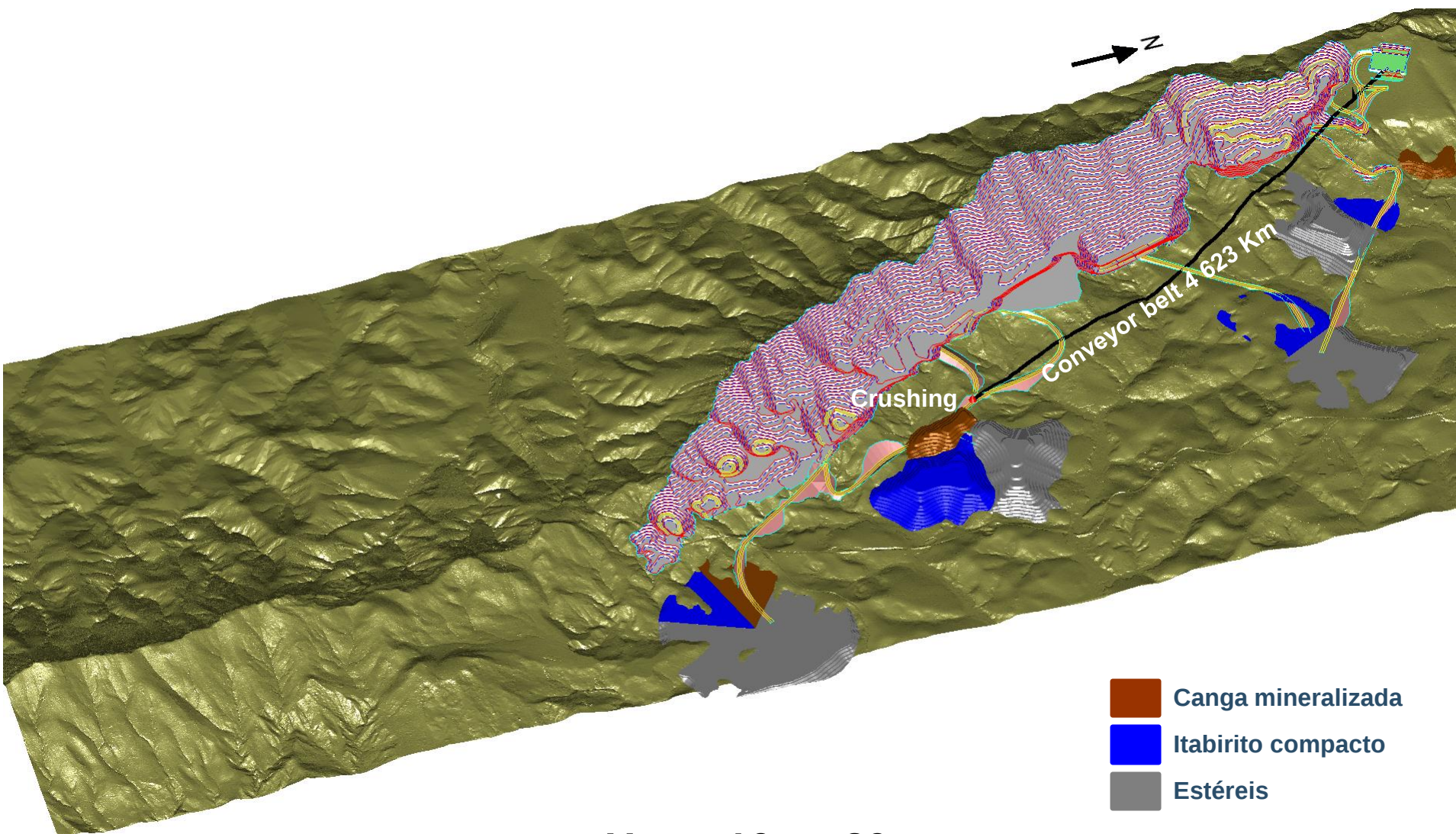
2nd Semester –Year 5



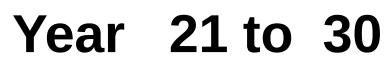
Year 6 to 10



Year 11 to 15



Year 16 to 20



PROCESS DEVELOPMENT

