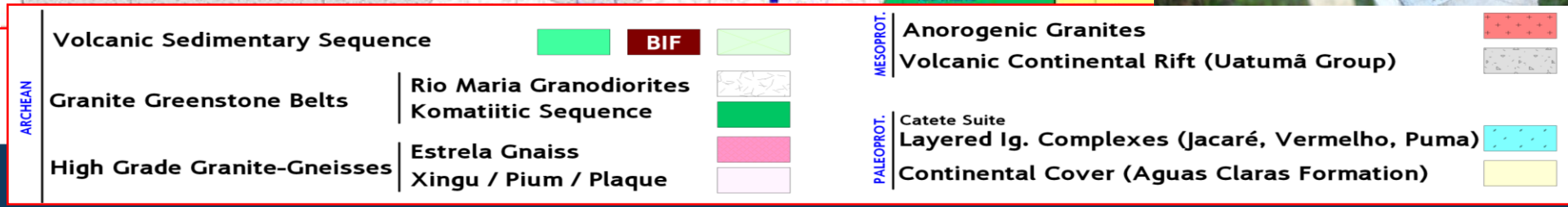
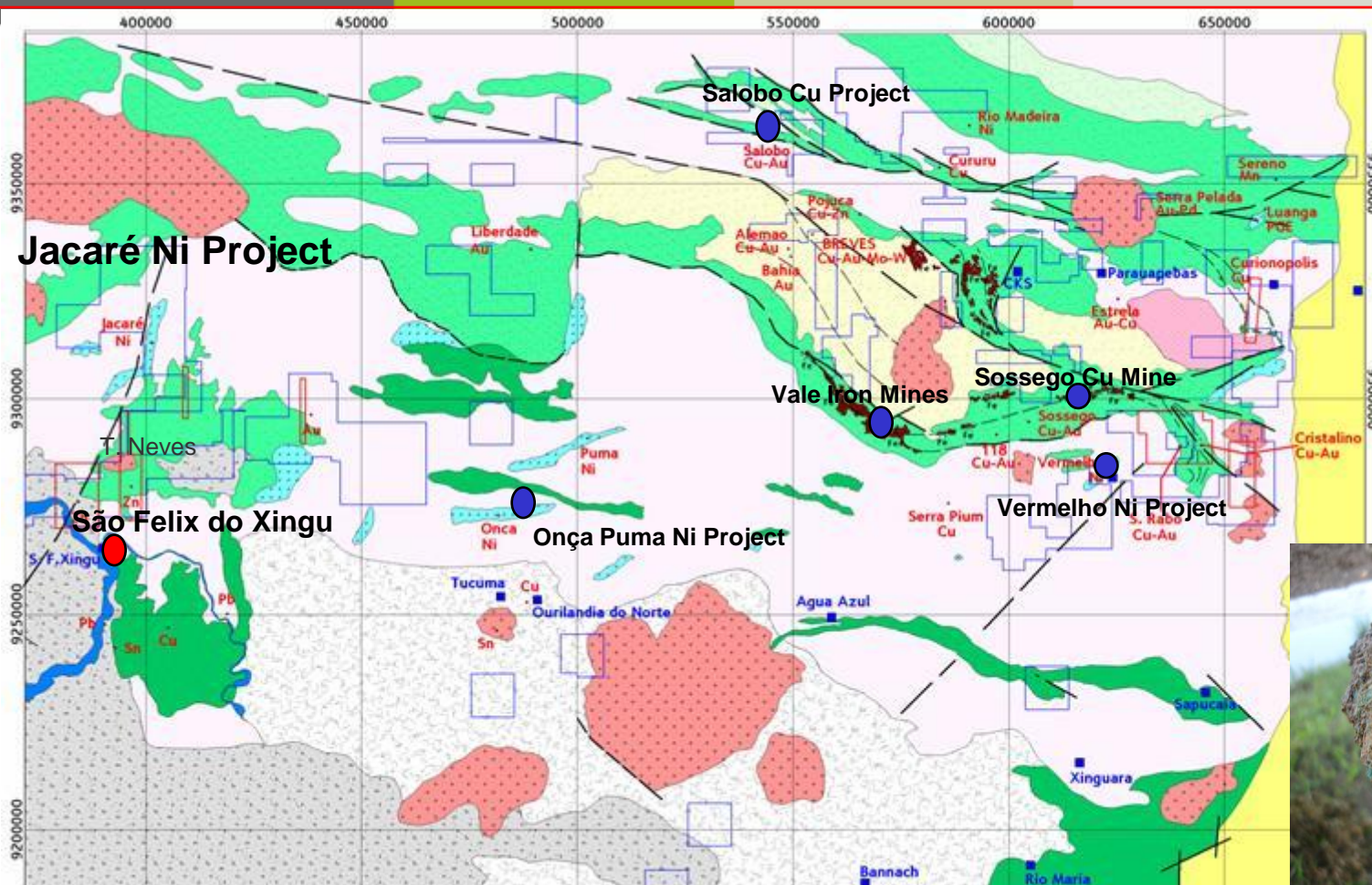






# Jacaré Nickel Deposit Regional Geology

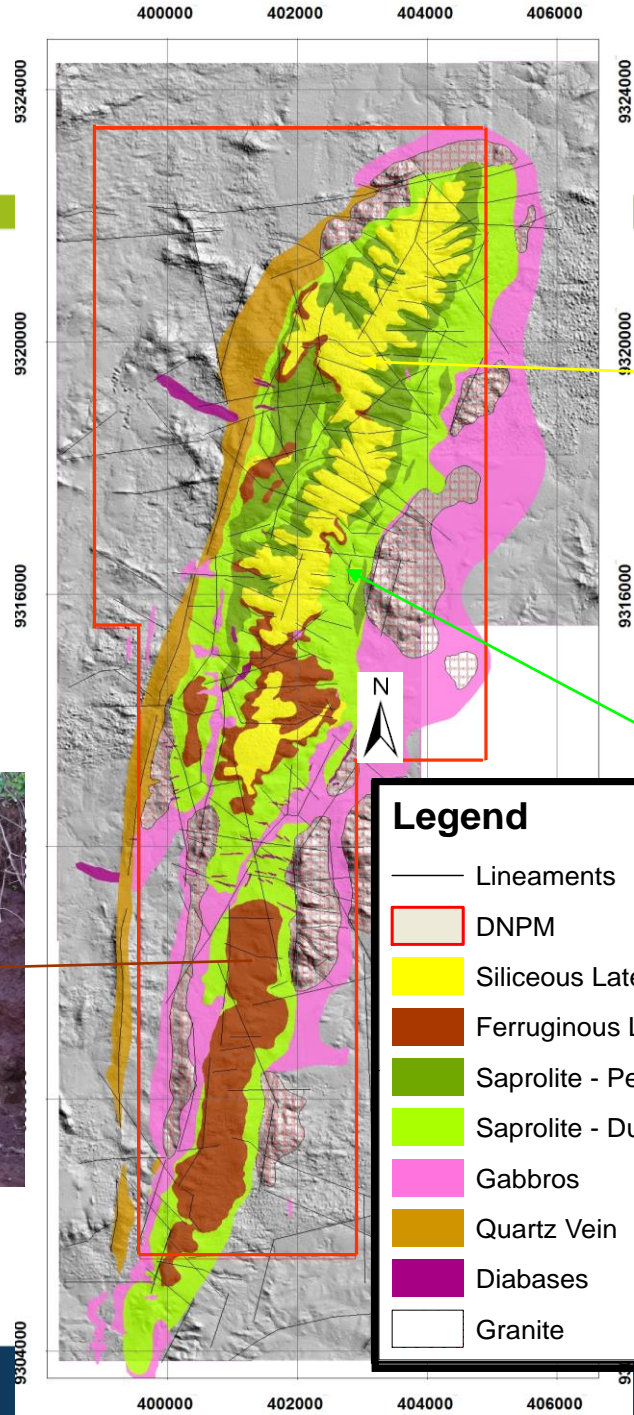


- ❑ Explored in the 1970's by Inco, who estimated a total resource of 54 Mt @ 1.41% Ni
- ❑ CVRD assumed ownership from 1985 to 1993, although appear to have done little exploration work
- ❑ Anglo American acquired the property in 1994 and commenced the preliminary geological work
- ❑ On 2002 the first RC drilling campaign was done with a total of 37 drillholes (1208 meters )
- ❑ The current exploration campaign commenced in 2004; on Q2 2008, a mineral resource was defined
- ❑ Current Total Resources of 495 Mt @ 1.19% Ni + 0.13% Co
- ❑ Conceptual Study (PAE) for the Brazilian mining Department (DNPM) delivered in August 2009
- ❑ The environmental studies are being executed to assist PAE
- ❑ Anglo Exploration aims to move the project to a pre-feasibility study



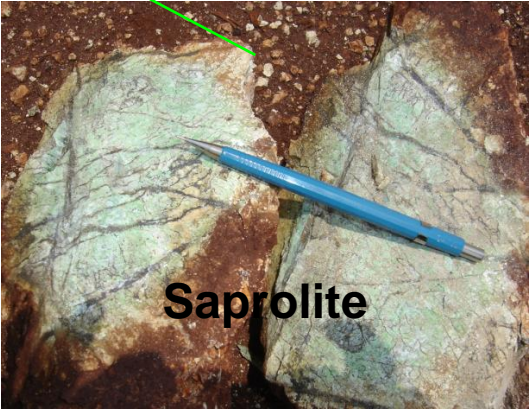


# Jacaré Nickel Deposit Geology and Ore Types

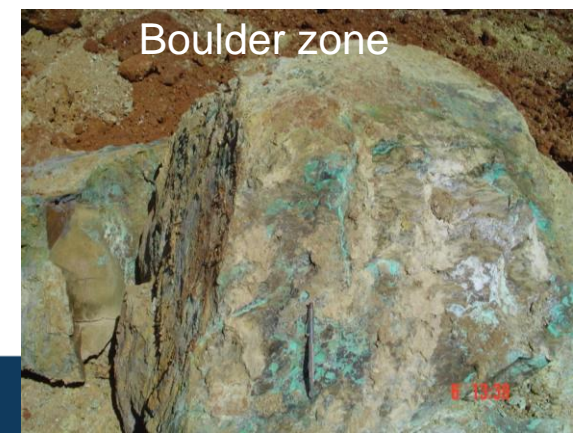
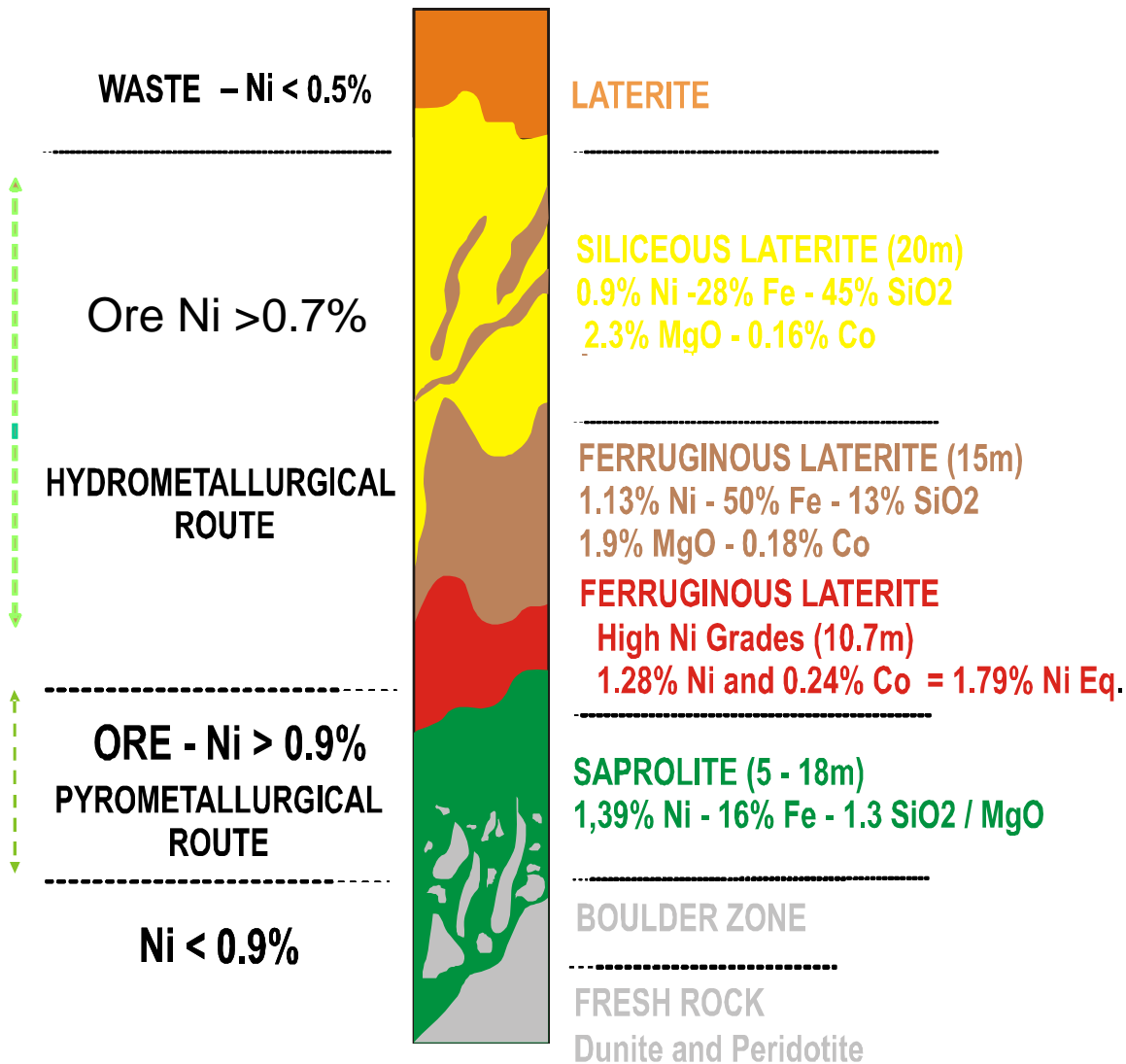


**Legend**

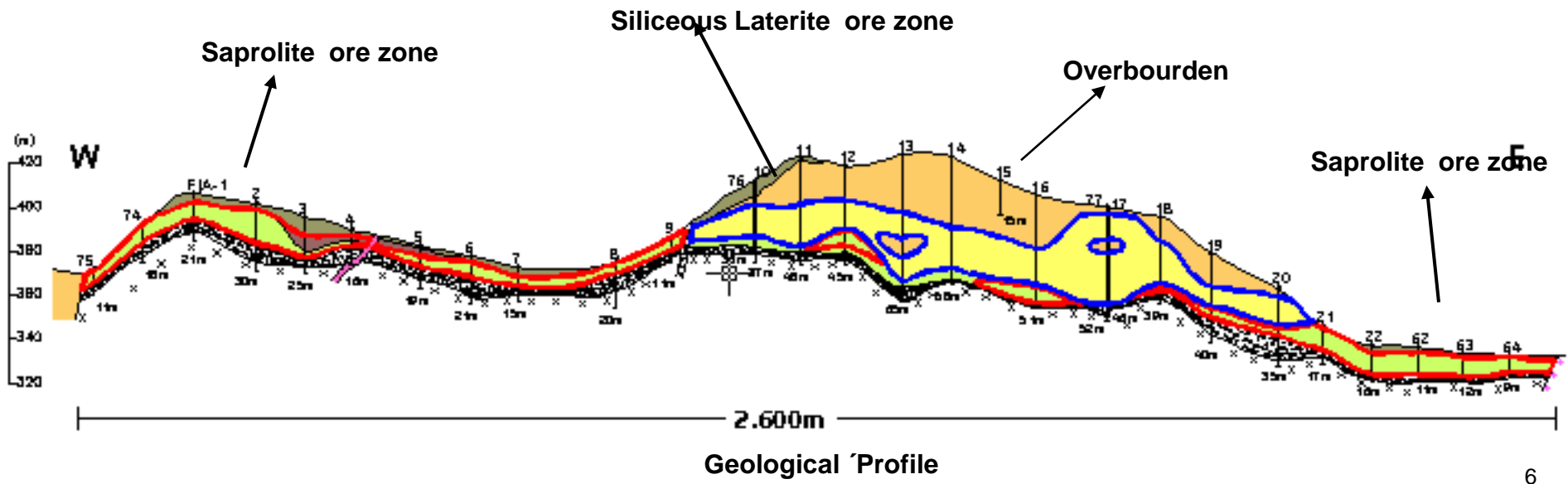
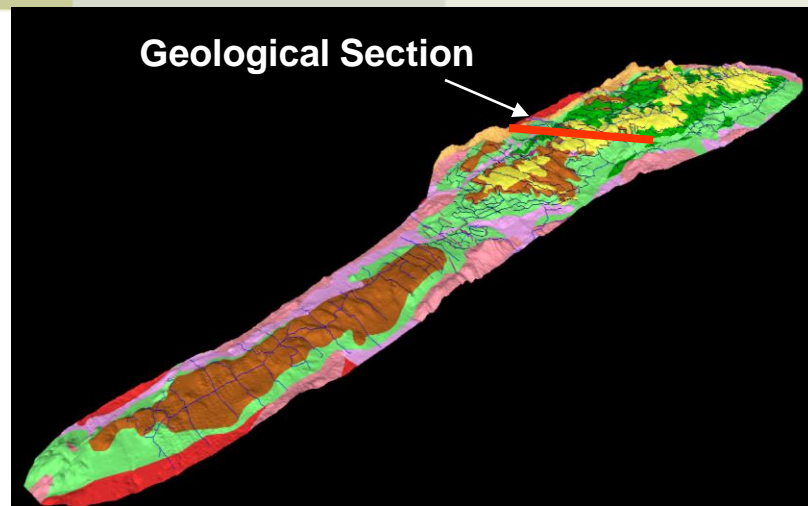
- Lineaments
- DNPM
- Siliceous Laterite
- Ferruginous Laterite
- Saprolite - Peridotite
- Saprolite - Dunite
- Gabbros
- Quartz Vein
- Diabases
- Granite



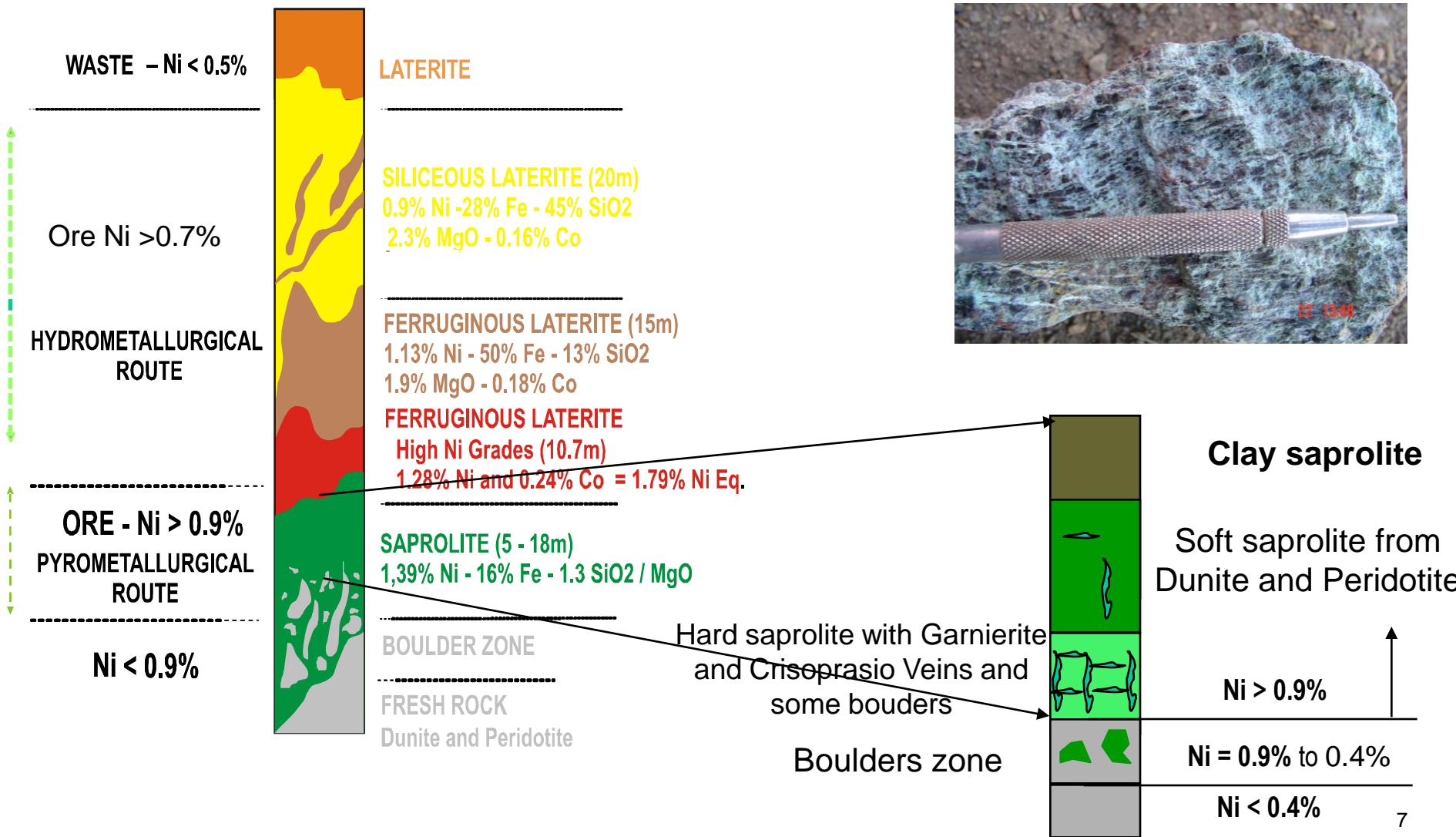
**Ferruginous  
laterite**





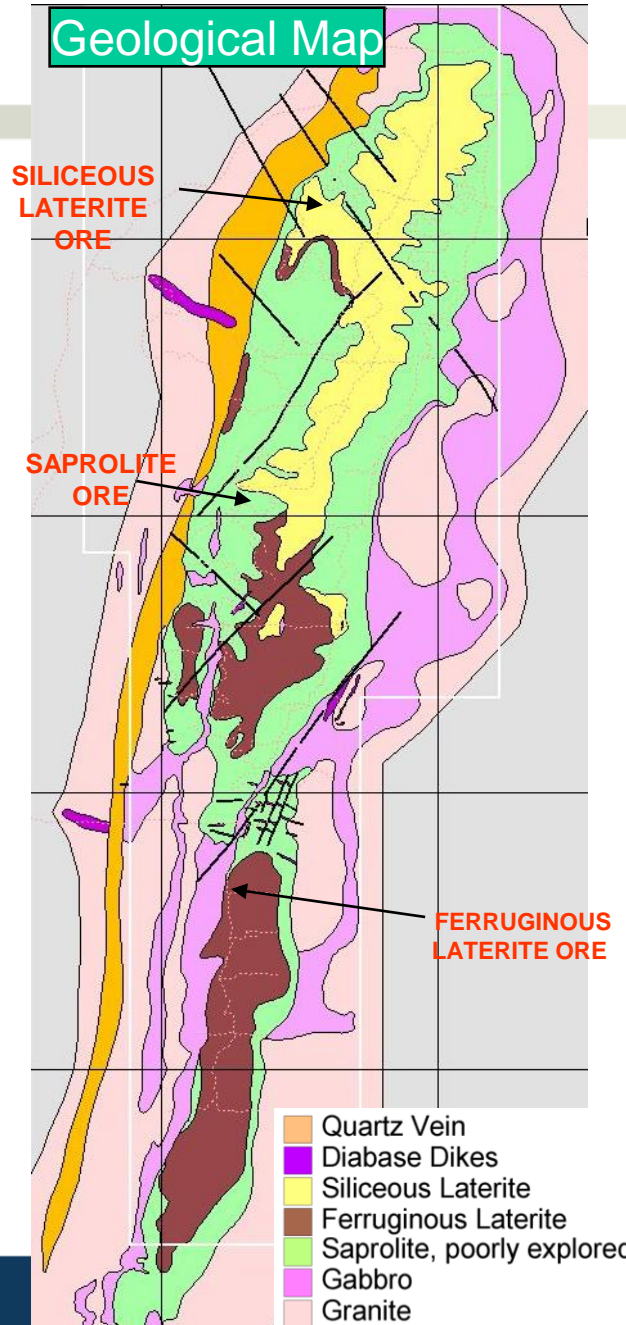
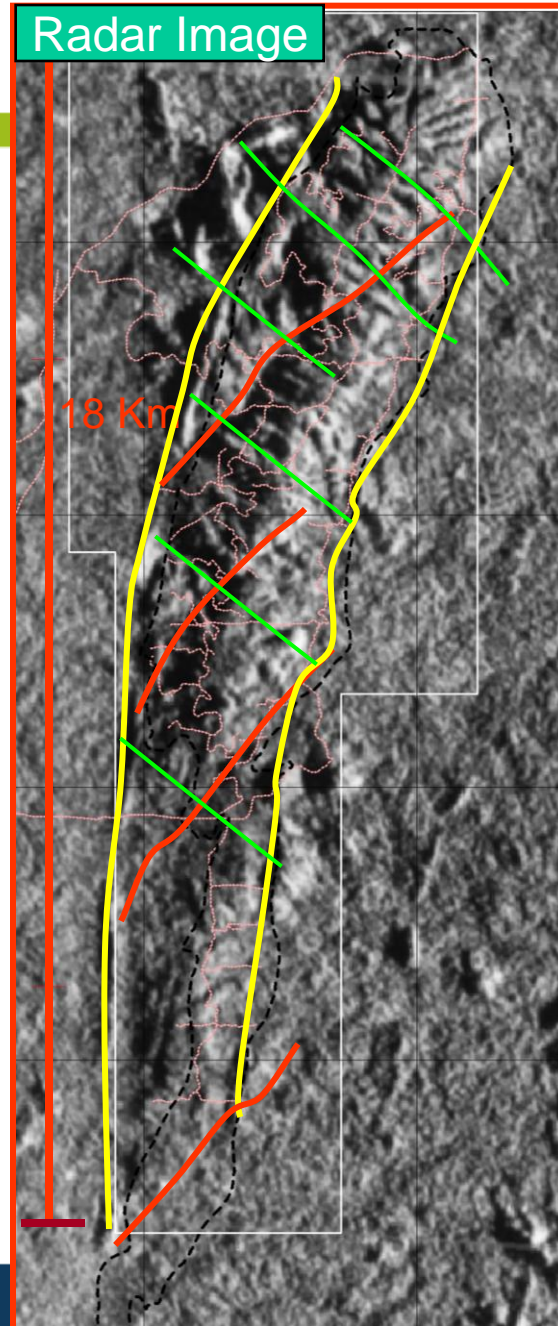


# Jacaré Nickel Deposit Geological Model for Saprolite

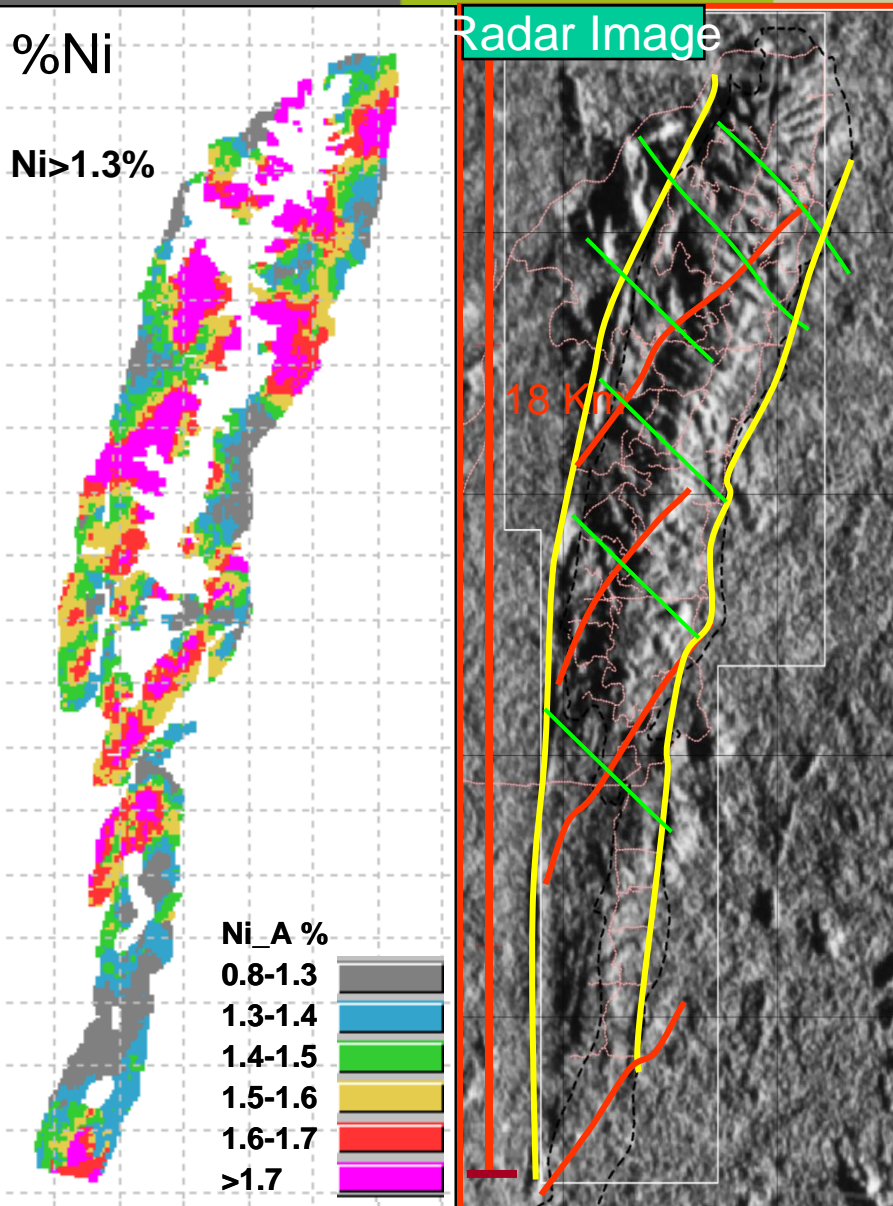




## Geological Map & Structural







### Lithological

- Associated on the saprolite form dunite and peridotite strongly serpentized and /or with chrysoprase and garnierite venulets.
- Hosted on the hard saprolite with fine silica, chrysoprase and garnierite venulets
- Associated on chlorite zones in the saprolite form dunite and peridotite strongly serpentized.

### Structural

- Fault zones with trend N20-30E and N 45-60W.



### Summary of Mineral Abundance Analysis

Mineral	Mass %
*Limonite ± Goethite :	40.45
Quartz :	32.99
*Ferruginous Quartz :	6.75
*Chlorite-Altered Chlorite :	6.75
*Clays :	4.12
*Serpentine-Altered Serpentine :	1.95
*Fe-oxides (Magnetite+Hematite):	1.86
Cr-spinel :	1.55
*Mn-hydroxides :	1.36
Talc :	0.26
Mica :	0.11
Al-hydroxides :	0.01
Others :	1.84
<b>Total:</b>	<b>100.00</b>



### Nickel distribution

Mineral Phases:	Mean Ni (wt.%) Content:	Percentage Contained Nickel:
*Limonite ± Goethite :	1.32	42.38
*Chlorite-Altered Chlorite :	5.97	32.54
*Clays :	2.23	7.29
*Serpentine-Altered Serpentine :	1.55	2.40
Others :	n.a.	15.39
<b>Total:</b>		<b>100.00</b>



### Summary of Mineral Abundance Analysis

Mineral	Mass %
*Limonite ± Goethite :	73.48
*Fe-oxides (Hem+Magh+Mag):	13.38
Cr-spinel :	3.32
*Mn-hydroxides :	2.57
Quartz :	2.53
*Clays :	1.65
*Serpentine-Altered Serpentine :	0.51
*Ferruginous Quartz :	0.45
Al-hydroxides :	0.27
*Chlorite-Altered Chlorite :	0.21
Others :	1.63
<b>Total:</b>	<b>100.00</b>

### Nickel distribution

Mineral Phases:	Mean Ni (wt.%) Content:	Percentage Contained Nickel:
Limonite ± Goethite :	1.32*	80.83
Mn-hydroxides :	2.03	4.35
Clays :	2.23*	3.07
Serpentine-Altered Serpentine :	1.55*	0.66
Chlorite-Altered Chlorite :	5.97*	1.05
Others :	n.a.	10.02
<b>Total:</b>		<b>100.00</b>



### Summary of Mineral Abundance Analysis

Mineral:	Calculated Total
*Serpentine - Lizardite Chrysotile Antigorite:	74.37
*Fe-hydroxide (Limonite±Goethite) :	9.83
*Ferruginous Quartz :	1.43
*Talc/Sepiolite Clay :	2.53
Quartz :	4.15
*Clinocllore :	3.37
Fe-oxides (Magnetite & Hematite) :	1.88
Cr-spinel :	1.14
*Mn-hydroxides :	0.97
Others :	0.08
Unmatched :	0.25
<b>Total:</b>	<b>100.00</b>

### Nickel distribution

Mineral Phases:	Mean Nickel (wt%) Content:	% Contained Nickel
Serpentine - Lizardite Chrysotile Antigorite:	1.4	69.9
Limonite ± Goethite :	1.3	8.3
Chlorite-Altered Chlorite :	1.5	3.3
Ferruginous Quartz :	0.9	0.6
Mn(Fe)-hydroxides :	5.9	3.7
Others/Unaccounted :	n.a.	14.2
<b>Total:</b>	<b>100.00</b>	





<b>ACCESS ROADS</b>	Field Lines (Km)	679.70
	Bulldozer (Hour)	15,908.80
	Kms Access Roads	399.70

<b>DRILLING TYPE</b>	<b>N° HOLES</b>	<b>METERS</b>
AIR CORE	178	2,474.67
DIAMOND	11	737.75
REVERSE CIRCULATION	3,398	79,601.00
<b>TOTAL</b>	<b>3,587</b>	<b>82,813.42</b>

<b>CHANNEL SAMPLING</b>	Meters	5,590.65
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<b>DENSITY</b>	From surface (drill pads)	369
	From Air Core Sample Drilling (recovery and fragments )	2,598

<b>METALURGICAL TEST WORK</b>	Volume of Samples (Tons)	84.78
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Samples Assayed = 88403 = Samples Assayed for check = 22100 (25%)

## Check Types

- Check Coarse Duplicate -
- Check fine Duplicate -
- Check Blank -
- Check Standards -
- Check Pulp -
- External Check Pulp

## Objectives

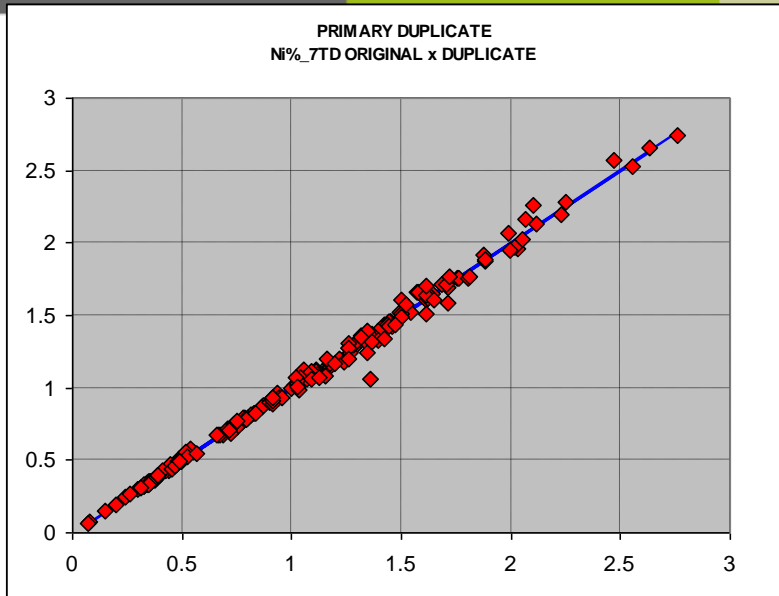
Sample Preparation  
Sample Preparation  
Sample Preparation  
Laboratory  
Laboratory  
Lakefield Laboratory

Sample standards using Jacaré ore were prepared in the international laboratories, namely;

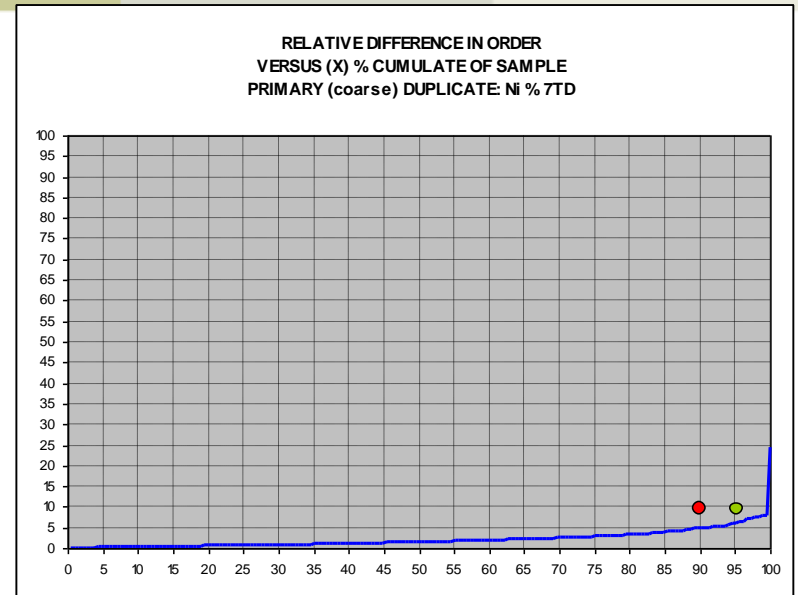
- Acme Analytical Laboratory in Canada
- Activation Laboratory in Canada
- ALS Chamex in Canada
- SGS Lakefield Geosol in Canada

- SGS Analabs in Australia
- Ultra Trace in Australia
- Minera Loma de Niquel in Venezuela
- CSIRO Land & Water in Australia
- Genalysis Laboratories Services in Australia<sub>14</sub>





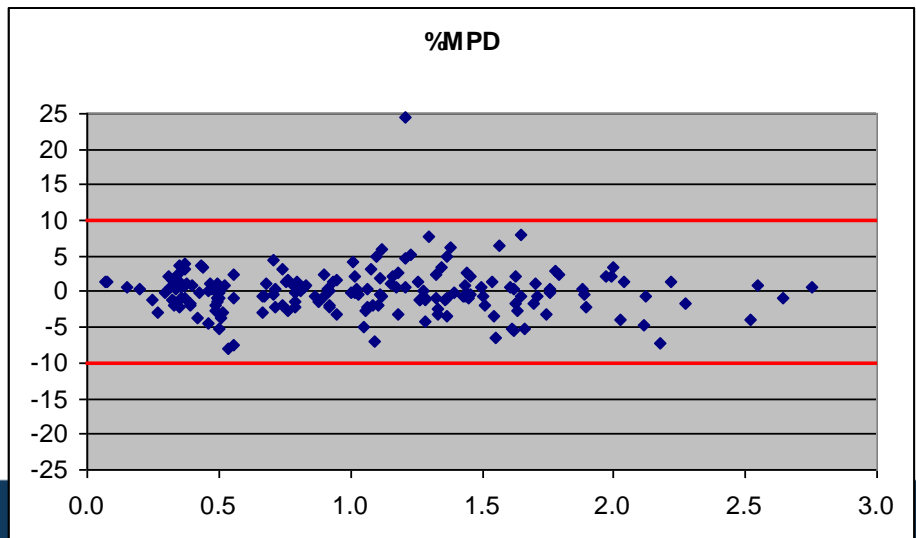
original x dupl. (Ni).



Relative difference (Ni)

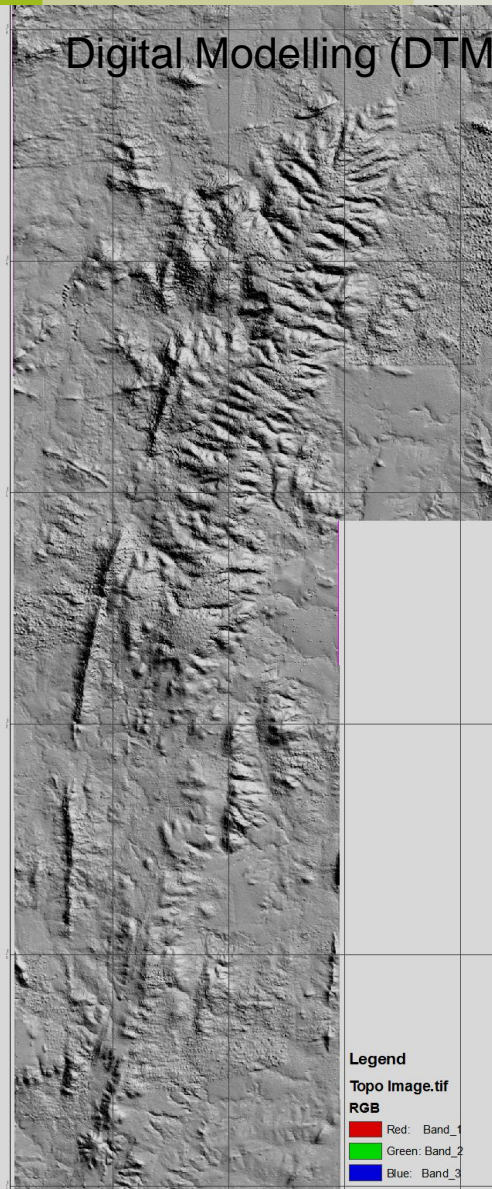
Eg - Coarse duplicate

Arithmetic average x Ponderate average (Ni)

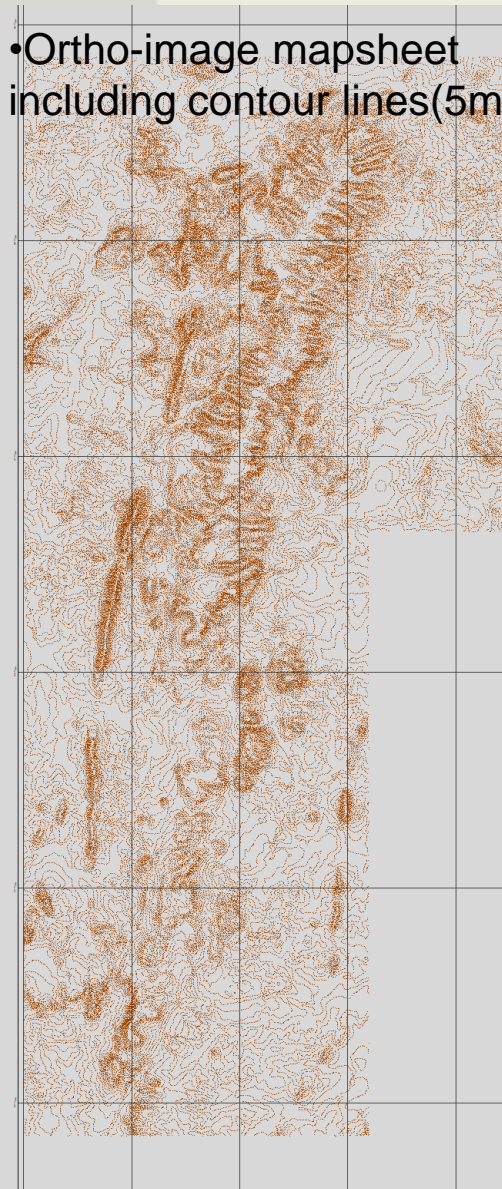


### Aerial topographic Survey (P Band Radar)

- Digital terrain model;
- Digital surface model;
- Band ortho-images;
- P band ortho-images;
- Ortho-image mapsheet including contour lines(5m)



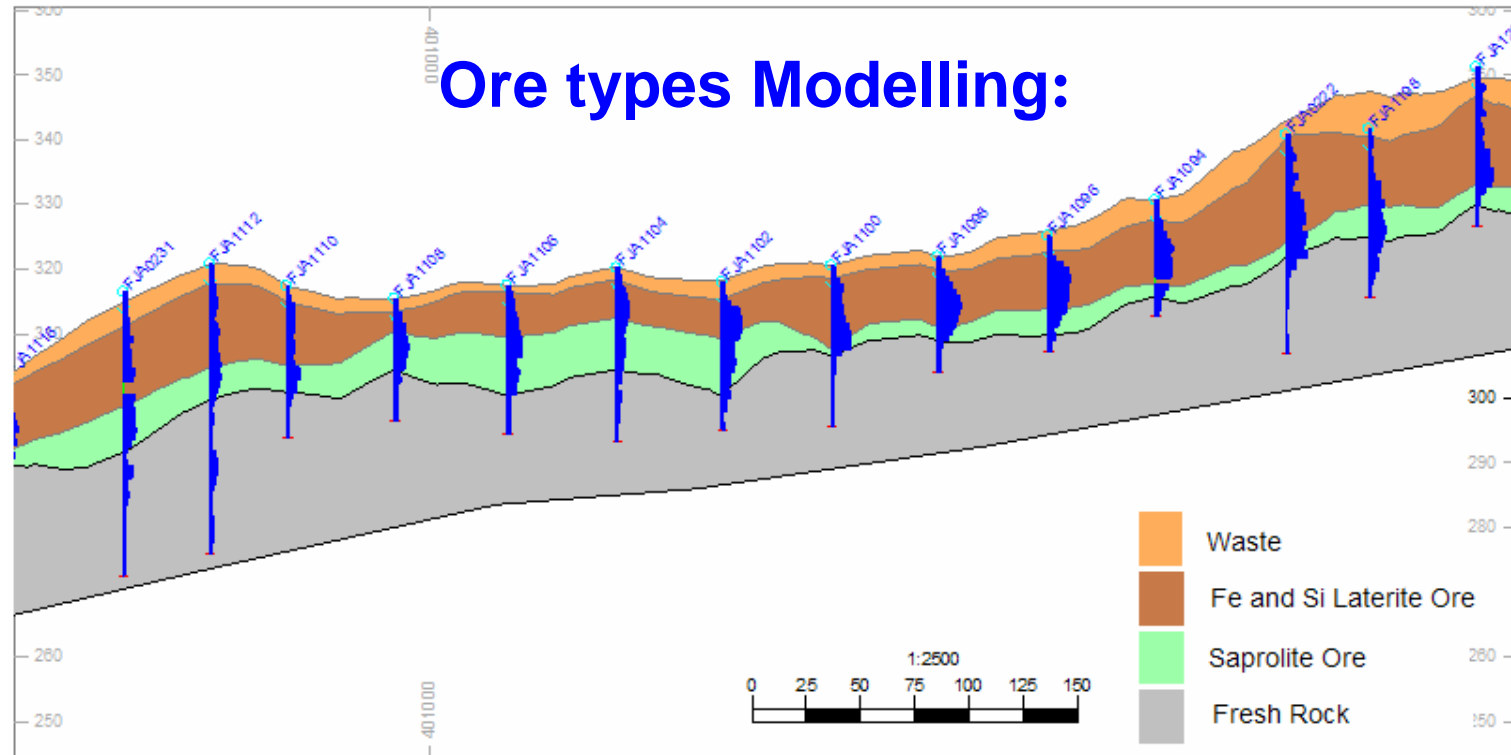
- Ortho-image mapsheet including contour lines(5m)



### Aerial topographic Survey

- Drill holes
- Access roads
- Channel samples
- Density samples





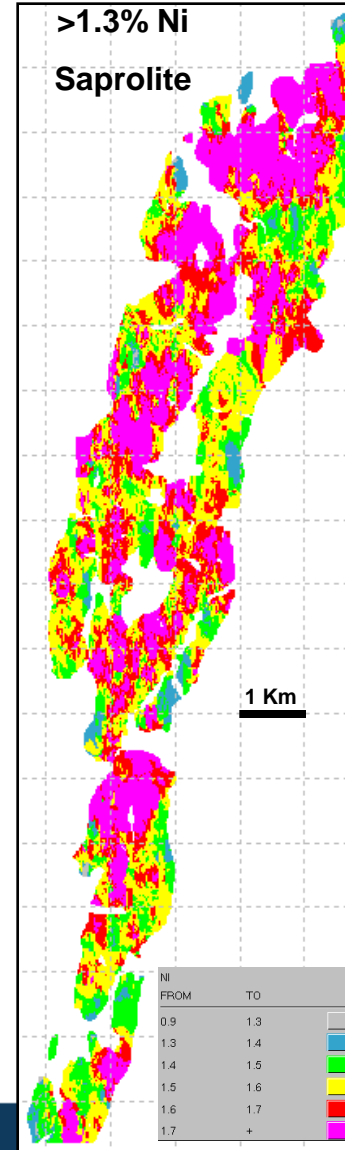
## Drilling Grid:

3587 holes

Ore Type	Measured	Indicated	Inferred
Saprolite	25x25	50x100	200x200
Ferruginous Laterite *	50x100	100x200	200x400
Siliceous Laterite	50x50	100x100	200x200

## Mineral Resources Summary

Reservas	Categoria	Kton	Ni	Fe	SiO2	MgO	Co	Cu	Al2O3	Cr2O3
MEASURED	Saprolito	28,587	1.50	14.59	36.55	27.57	0.045	0.002	1.54	1.14
	Lat Silicosa	20,828	0.96	28.03	46.57	2.30	0.166	0.007	2.38	2.31
	Lat Ferruginosa	61,452	1.06	51.42	7.75	1.59	0.186	0.010	4.12	2.65
INDICATED	Saprolito	62,586	1.38	14.25	36.26	27.61	0.041	0.002	1.65	1.24
	Lat Silicosa	28,608	0.97	28.97	44.75	2.25	0.159	0.007	2.97	1.94
	Lat Ferruginosa	111,601	1.07	50.95	7.46	1.87	0.181	0.011	4.23	1.99
INFERRED	Saprolito	66,941	1.41	15.05	35.76	26.82	0.045	0.002	2.04	1.43
	Lat Silicosa	46,936	0.95	28.12	46.16	2.17	0.164	0.008	2.95	1.98
	Lat Ferruginosa	67,576	1.28	52.23	23.44	1.45	0.179	0.011	4.40	2.08
SUBTOTAL	Saprolito	158,114	1.41	14.65	36.10	27.27	0.043	0.002	1.80	1.30
	Lat Silicosa	96,371	0.96	28.35	45.83	2.22	0.163	0.007	2.83	2.04
	Lat Ferruginosa	240,629	1.13	51.43	12.02	1.68	0.182	0.011	4.25	2.18
TOTAL	Saprolito	158,114	1.41	14.65	36.10	27.27	0.043	0.002	1.80	1.30
	Laterita	337,000	1.08	44.83	21.69	1.83	0.177	0.010	3.84	2.14
<b>TOTAL GERAL</b>		<b>495,114</b>	<b>1.19</b>	<b>35.19</b>	<b>26.29</b>	<b>9.96</b>	<b>0.134</b>	<b>0.007</b>	<b>3.19</b>	<b>1.87</b>





- ✓ PAE ( Plano de Aproveitamento econômico) – August 2009
- ✓ The environmental studies are being executed to assist PAE

### PAE Study Summary

- ✓ Ore Types:
  - Saprolite (ferroníquel production ): like Barro Alto, Codemin (Brazil) and Loma de Níquel (Venezuela) deposits
  - Laterite like Cuban e New Caledonia deposits.
- ✓ Mineral Resources
  - Sprolite : 158Mt @ 1.41%Ni
  - LateriteS : 337Mt @ 1.08%Ni + 0.18%Co
- ✓ Open pit Mine
- ✓ Two Metallurgical Plants
  - Pirometallurgy (Saprolite ore) - Production schedule *35.000 Tons/Year of Nickel;*
  - Hidrometallurgy (Laterites ores) - Production schedule 47.000 de Tons/year of electrolytic Nickel + 5.400 Tons/year electrolytic cobalt
- ✓ Preliminary capex scheduled – US\$ 4.5 bi
- ✓ Job generation: 1.138 direct jobs, 3.700 indirect
- ✓ Challenges; Energy; Electric power consumption: 270 MW. Construction of transmission line of 230kV /135 km

