

Itaituba Vanadium Project Tapajos Province, Brazil

Itaituba Vanadium Project





- Gabbro complex with massive and disseminated magnetite enriched in vanadium.
- Potential direct shipping product from partially oxidized massive iron-titaniumvanadium bodies, at or near surface.
- Four shallow diamond drill holes completed to date also cut significant intervals of disseminated magnetite mineralization in the gabbros.
- Davis tube recovery tests indicate disseminated magnetite contents from 10% to 34.6% with significant vanadium grades (0.75 to 1.1% V205) over intervals of several tens of meters in core samples from four scout drill holes.
- Ground magnetic survey data indicates presence of several more magnetiterich gabbro units along the north-south strike trend of the complex, none of which have been drill tested.
- Exploration target for disseminated vanadium-rich magnetite mineralization.

Access and Infrastructure





Project lies on highway BR-163 approximately 30 km SE of Itaituba and is accessed via highways BR-230 & BR-163. Santarem is 330km away to the north on BR-163.

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- 52 Km by tarred highway to Tapajos River Port at Miritituba or 42 km using the secondary road to km-11 on BR-230.
- Barges carrying soya beans with +6,000t capacity can transit downstream from Miritituba on the Tapajos River in wet season but dry season loads restricted to 1,500t.
- River transport Miritituba-Santarem = 260km, Santarem-Macapa (Santana port) = 560km.
- Bauxite is shipped from Trombetas to world refineries and grain ships load soya beans at the port of Santarem for world markets.

Location and Geology







Geology, Vegetation & Mineralization



 Massive and disseminated magnetite mineralization is hosted in a gabbro intrusive complex >3 km long (N-S) and 1 km wide, of probable Middle Proterozoic age (ca. 1.9 Ga)

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- Target zone lies on the crest and flanks of the ridge on the horizon in this photograph; there are some areas with patches of regrowth scrub, but the main zone of mineralization is grassland used for cattle grazing.
- The massive magnetite (Fe-Ti-V) sill-like bodies are exposed at surface.
- Diamond drilling has also intercepted enriched disseminated magnetite phases in the gabbro, now recognized as an important exploration target, as magnetic separation can produce magnetic concentrates with a vanadium concentrate grade of ~1% V205.

Exploration





- Geological mapping and prospection for massive iron formation and chip sampling of most representative and less weathered outcrop.
- Sample analyses for whole rock oxides and multi-elements.
- Ground geophysical survey 100m to 200m spaced lines, readings every 10m (GPS-controlled).
- Detailed Interpretation of survey data and definition of magnetic zones (and co-incident magnetite iron formation).
- Four shallow diamond drillholes.
- Ground magnetic data indicates presence of several more magnetiterich gabbro units along the north-south strike trend of the complex none of which have been drill tested.

Surface Sample Results



11 chip samples of least weathered outcrops in various magnetite bodies in the central part of zone show average values as follows:

- Fe203 69.41 % (range 64.77 71.33)
- Calc. Fe 48.54 %
- TiO2 22.98 % (16.43-26.28)
- V205 0.45 % (0.405 0.497)
- Low SiO2 1.08 % (0.04-1.8)
- Low Al2O3 2.8 % (1.97-3.93)
- Low P 0.05 % (0.03-0.11)
- Strong weathering extends to between 20m and 25m vertically and there is a sharp contact with the fresh rock. Much of the more massive bodies material could be easily mined and beneficiated from the weathered zone because the enclosing host gabbro units are completely weathered to soft clays.





DRILL HOLE	E-UTM	N-UTM	From (m)	To (m)	Width (m)	Davis Tube Results (% magnetic fraction)	V2O5 content in Magnetic concentrate (%)
SR-01	624356	9500481			No significant re	esults	
SR-02	624569	9500559	70.90	75.35	4.45	20.75	0.64
SR-03	624463	9500378	24.03	41.80	17.77	17.34	0.83
SR-04	624362	9500104	25.70	73.35	47.65	11.02	0.91
incl			51.40	55.75	4.35	15.56	1.08
and			66.35	71.85	5.50	14.49	1.15

Commentary



A four-hole (total of 250.65m) diamond drill program was completed to determine the attitude and vertical depth extension of a number of the massive vanadium-bearing titanium-magnetite bodies previously identified as having potential as direct shipping ore (DSO) at the surface.

Core logging also identified wide intervals rich in disseminated magnetite within the gabbro units below the massive magnetite bodies in three of the drill holes. Given the restricted nature of this drilling program this indicates a huge up-side potential for discovery of further disseminated magnetite mineralization.

Preliminary Davis Tube tests run on a few core samples from these disseminated magnetite units, selected for a range of magnetic susceptibility values, produced magnetic concentrate recoveries from 6.6% to 42.6%, with several of these concentrate samples showing vanadium values at 1% V205 (maximum of 1.03% V205).

Lara subsequently systematically cut and sampled the remainder of the drill core and identified wide intervals with magnetic fraction recoveries in excess of 10% and with vanadium grades in the magnetic concentrates from 0.7 to 1.15% V2O5 in two of the drill holes.

The massive titanium-magnetite bodies intercepted in the drill holes range in thickness from 3 to 7.9m and appear to be part of a sheeted array of sill-like bodies with sub-horizontal to shallow westerly dips. Surface samples from the massive magnetite bodies reported vanadium values in the range from 0.3% to 0.48% V205 associated with very anomalous titanium values ranging from 15% to 25% TiO2.

The enrichment factor for vanadium values from core sample to magnetic concentrate samples from the disseminated magnetite units varies between 3- and 10-fold, with the highest enrichment occurring in the lower grade samples of magnetite-gabbro carrying very coarse mm-size disseminated magnetite crystals.

Sampling QAQC



Sampling methodology, Chain of Custody, Quality Assurance and Quality Control

All the rock channel and drill core sampling were carried out by or under the supervision of the Company's Vice-President Exploration and the chain of custody of the samples and drill core from the project area to the Company's sample preparation facilities in Itaituba and Canãa dos Carajás was continuously monitored.

Sample intervals for the drill core samples varied between 0.2m and 3.0m. The core samples were delivered to the sample preparation laboratories of SGS-Geosol in Parauapebas and to ALS in Goiânia where the samples were crushed and pulverized. SGS-Geosol dispatched sample pulps to their own analytical laboratory at Vespasiano, near Belo Horizonte, Minas Gerais State, Brazil, whereas ALS dispatched the pulps to their dedicated facility in Loughrea, Ireland.

Davis Tube Recovery magnetic concentrates were obtained for each sample, using a magnetic field force of 3000 Gauss and the concentrates, after drying and weighing to determine the percentage of magnetic iron concentrate recovery, were analyzed by XRF for V205, TiO2, Fe2O3 and seven other oxides after fusion with lithium tetraborate and for Loss on Ignition, which was determined by heating the sample in a furnace at 405 degrees centigrade.

Both SGS-Geosol and ALS inserted blank, certified standard and duplicate samples into each sample batch. Both laboratories are independent from Lara.

Michael Bennell, Lara's Vice President Exploration and a Fellow of the Australasian Institute of Mining and Metallurgy (AusIMM), is a Qualified Person as defined by National Instrument 43-101 *Standards of Disclosure for Mineral Projects* and has approved the technical disclosure and verified the technical information in this news release.