

CARTOGRAPHIC SYMBOLS

	Post Survey Route with kilometre post and reverse kilometre post		Telecommunications cable position, in Service/Out of Service/Planned (As found in magenta)
	Beach Mark/Alter Course		Pipeline position, in Service/Out of Service/Planned (As found in magenta)
	Survey Route		Power cable position, in Service/Out of Service (As found in magenta)
	Coastline (from Admiralty Charts)		Chart Matchline
	Territorial Sea / EEZ limit		

BATHYMETRY

Bathymetric contours in metres. Contour interval may be reduced to aid in clarity. All bathymetry reduced to Lowest Astronomical Tide (LAT)

Downslope gradient in degrees (°) as measured over the shortest significant distance

Approximate limit of swath bathymetry coverage (shown only in areas of fair seabed)

SEABED FEATURES AND SHALLOW GEOLOGY

	Coral		Isolated sonar contact with reference number (length x width x height in metres where measurable; n/nh = no measurable height)
	Gas seepage area with predominant sediment classification		Linear sonar contact, dished where partially buried
	Boulder with predominant sediment classification		Unidentified magnetic anomaly with reference number and amplitude
	Fine sediment (predominantly CLAY/SILT)		Cable/Pipeline position, as determined by magnetometer, with reference number and amplitude
	Coarse sediment (SAND and GRAVEL)		Seabed sample location with reference number
	Very coarse sediment (COBBLES and BOULDERS)		IC (Piton Core)
	Subcapping ROCK with predominant sediment classification (sediment thickness = target burial depth)		OS (Grab Sample)
	ROCK outcrop		DS (Diver Sample)
	HARDGROUND (Very dense/silicified/consolidated sediment)		DP (Diver Probing)
	Sediment or feature boundary		MxyCPT (CP) Location with reference number
	Inferred Sediment or Feature Boundary		Small outcrop of rock with height in metres if discernible
	Approximate limit of side scan sonar coverage and survey swath		Seabed DEPRESSION or POC/MARK with diameter (d) and depth (D) in metres, where discernible
	Seabed scar (trail or anchor)		Orientation of SANDWAVE crest (with wavelength and height in metres)
	Charted or reported wreck		Orientation of MEGARIPPLE crest (with wavelength and height in metres)
	Dumping ground database position		Orientation of sediment ribbon
	Well / Platform		Fault with depth below seafloor (hachures on down side)
	Oil Concession Block		Cherted or reported wreck
			Located wreck with reference no. (length x width x height in metres where measurable)
			Isobath Contours shown at 1m interval with labels every 1m
			Anchorage Area / Fishing Area (Admiralty chart position)
			Anchorage / Fishing Prohibited (Admiralty chart position)

CHART COMMENT:

GENERAL NOTES:

SURVEY VESSEL:	M.V. Ocean Endeavour	M.V. Capibá Eng III
Surface positioning system:	Furuno Starfix HP US945S	Applan POSMV WaveMaster, Verpos LDS
Underwater positioning system:	Sonarteq Fingert 1 USBL	Reson Seabat T-20
Bathymetry:	Kongsberg EM1202	
Morphology and stratigraphy:	Kongsberg EM60 Combi	
Magnetometer survey:	Edgetech 4200-F3	Edgetech 4200 MP
Geotechnical:	Kongsberg Coda Octopus	Kongsberg Geosacoustics
	SEB Seaprobe SSS/SBP	Geopulse
	Geomatrix 882	Marine Magnetics Seafloor
	Kullenberg Piton Core	Van Veen Grab Sampler
	Neptune 3000 CPT	

Target burial depth: 1 m below seabed

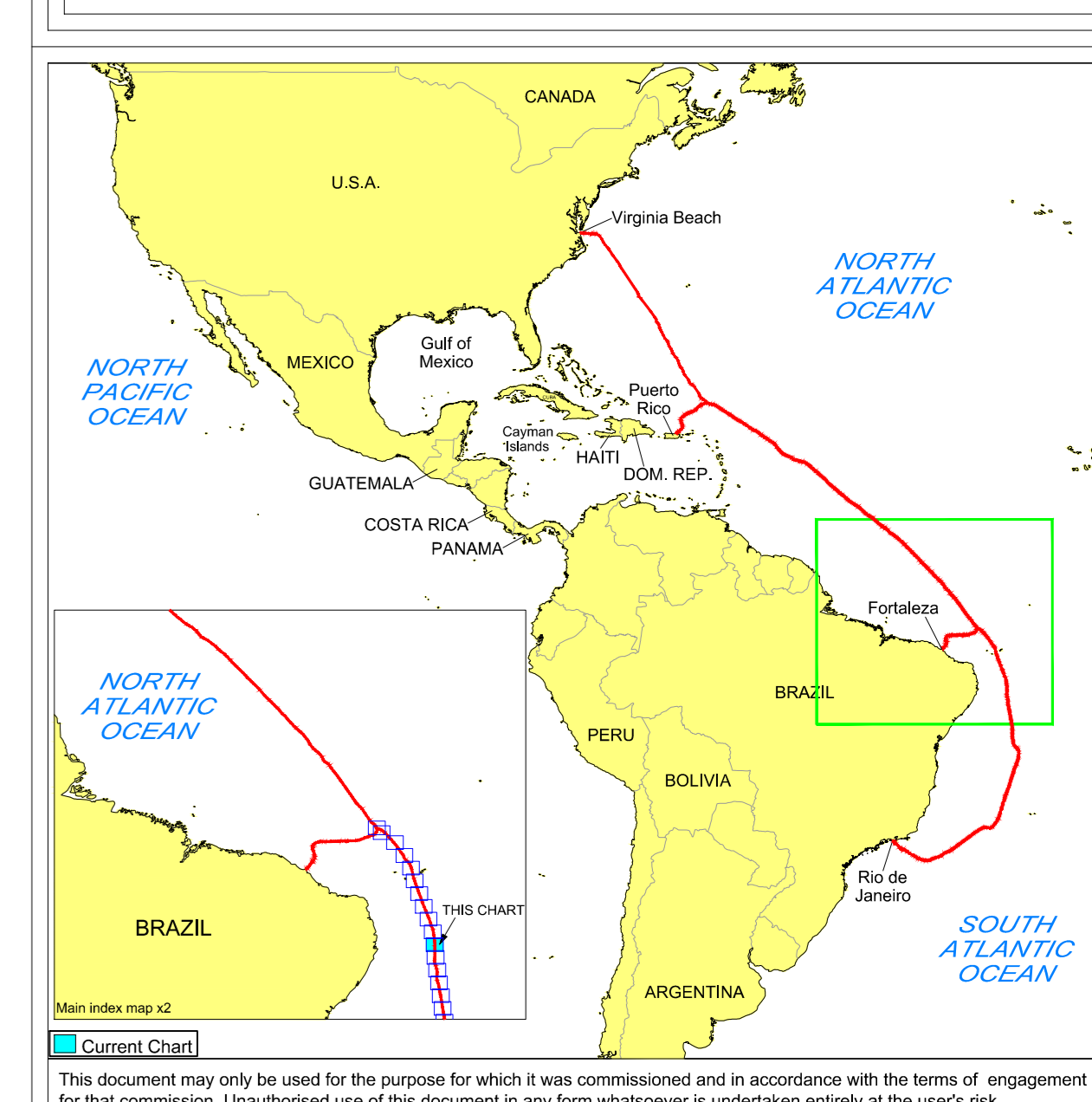
Descriptive Terms and Definitions: The criteria used for interpretation and descriptions are presented in the Survey Results

MultiBeam Processing Parameters: Depths in metres, reduced to LAT

Predictions used from tide stations: Rio de Janeiro, Brazil

GEODETIC PARAMETERS:

Projection: MERCATOR	Scale Factor: 1
Longitude of Origin: 53°W	Datum: WGS84
Standard Parallel: 7°N	False Easting: 3 000 000
Semi-Major Axis (a) (metres): 6378137.000	False Northing: 5 000 000
Reciprocal Flattening (1/f): 298.257223563	



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Survey Date: MAY to AUGUST 2016

Scale: **NATURAL SCALE 1 : 100,000 at 7°N**

(At Mid-Latitude of Chart)
TRUE SCALE 1 : 98864.74 km

Purchaser: **TELXIUS** (Enabling Connectivity)

Contractor: **Alcatel-Lucent**

Surveyor: **Gardline**

Project Name: **BRUSA CABLE ROUTE SURVEY**

Document Title: **SEGMENT 7 NORTH-UP CHART CHART NO. 010 OF 071 (KP 735.621 - KP 813.667)**

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ROUTE BASED UPON: BRUSA PRR02 File Name: BRUSA.S7.NU010

REVISION 01