

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		Pipeline position, in Service/Out of Service/Planned (As found in magenta)
	Alter Course		Power cable position, in Service/Out of Service/Planned (As found in magenta)
	Survey Route		Chart Matchline
	Coastline (from Admiralty Charts)		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)		Approximate limit of swath bathymetry coverage (shown only in areas of flat seabed)
	Downslope gradient in degrees (°) as measured over the shortest significant distance		

SEABED FEATURES AND SHALLOW GEOLOGY

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

CHART COMMENT:

GENERAL NOTES:

SURVEY VESSEL	M.V. Ocean Endeavour	M.V. Capibá Rio III
Surface positioning system	Furgo Starbuck HP 1504SS	Applan POSMV Watermaster, Verpos LDS
Underwater positioning system	Scansaver Fingert 1 USBL	Reson Seabat T-20
Bathymetry	Kongsberg EM1002, Kongsberg EM600 Combi	
Morphology and stratigraphy	Edgetech 4200-FS, Kongsberg Chirp and pager, SES Seaglobe SSS/SBP	Edgetech 4200 MP, Kongsberg Oceanosonics, Oceanultra
Magnetometer survey	Geomatrix M&T	Marine Magnetics Seateq
Geotechnical	Kullenberg Piston Core, Neptune 3000 CPT	Van Veen Grab Sampler

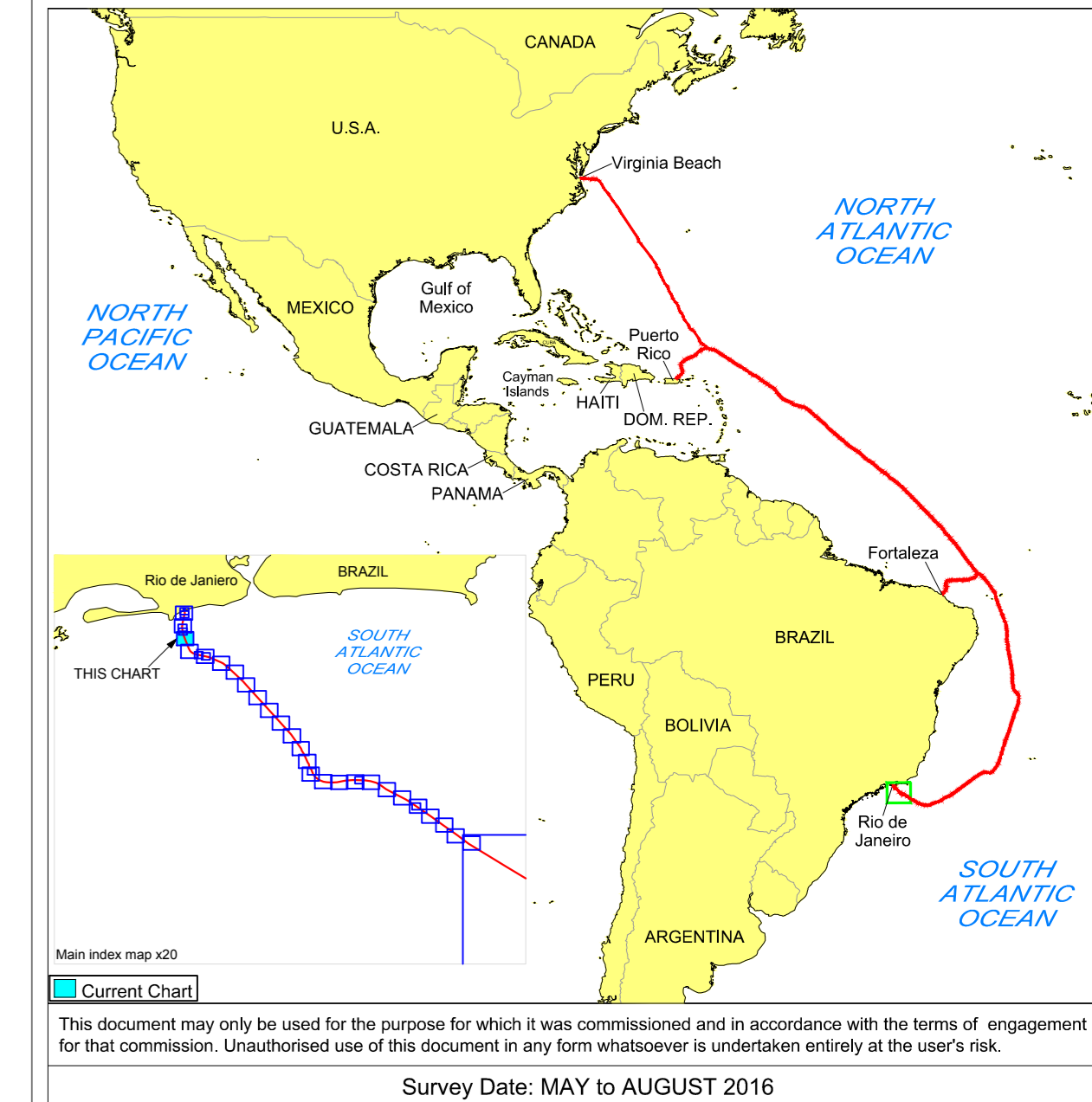
Target burial depth: 1.0m below seabed

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 : 10,000 at 7°N**

(At Mid-Latitude of Chart)
 TRUE SCALE 1 : 9996.64 km

Purchaser: **TELXIUS** (Building Connectivity)

Contractor: **Alcatel-Lucent**

Surveyor: **Gardline**

Project Name: **BRUSA CABLE ROUTE SURVEY**

Document Title: **SEGMENT 7 NORTH-UP CHART CHART NO. 067 OF 071 (KP 3642.172 - KP 3649.851)**

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REVISION 01