

### 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 Manhole		Pipeline position, in Service/Out of Service/Planned (As found in magenta)
	Alter Course		Power cable position, in Service/Out of Service (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 full swath)
	Downslope gradient in degrees (°) as measured over the shortest significant distance		Bathymetric MBES spot depths

### TOPOGRAPHIC FEATURES

	General Topographic Features (with annotation)		Beach Manhole (CEDAE)
	Boundary (feature)		Beach Manhole (CET Rio)
	Contour in metres above survey datum		Beach Manhole (Fibra optica)
	Spot levels below survey datum		Beach Manhole (PY column)
	High Water Mark		Beach Manhole (Rio Luz)
	Low Water Mark		Beach Manhole (Telefonica)
	Fence		Fence Post
	Road		Beach Probe Point
	River		Concrete ball
	Cycle Lane		Volleyball post
	Wall (Low Wall)		Electric Pole
	Kiosk Decking		Lamp Post
	Shower Area		Tree
	Public Telephone		Vegetation Area
			Parking Area
			Storm Drain

### CHART COMMENT:

### GENERAL NOTES:

**SURVEY VESSEL:** M.V. Ocean Endeavour  
**Surface positioning system:** Furgo Star6 HP US98SS  
**Underwater positioning system:** Sontar/Star Ranger 1 USBL  
**Bathymetry:** Kongsberg EM1202, Kongsberg EM600 Combi

**Morphology and stratigraphy:** Edgetech 4200-FS, Kongsberg Chirp and pringer, SES Saugbrø 555/SBP, Geometrics 862

**Magnetometer survey:** Kullenberg Proton Core, Neptune 3000 CPT

**Target burial depth:** 1.0m below seabed

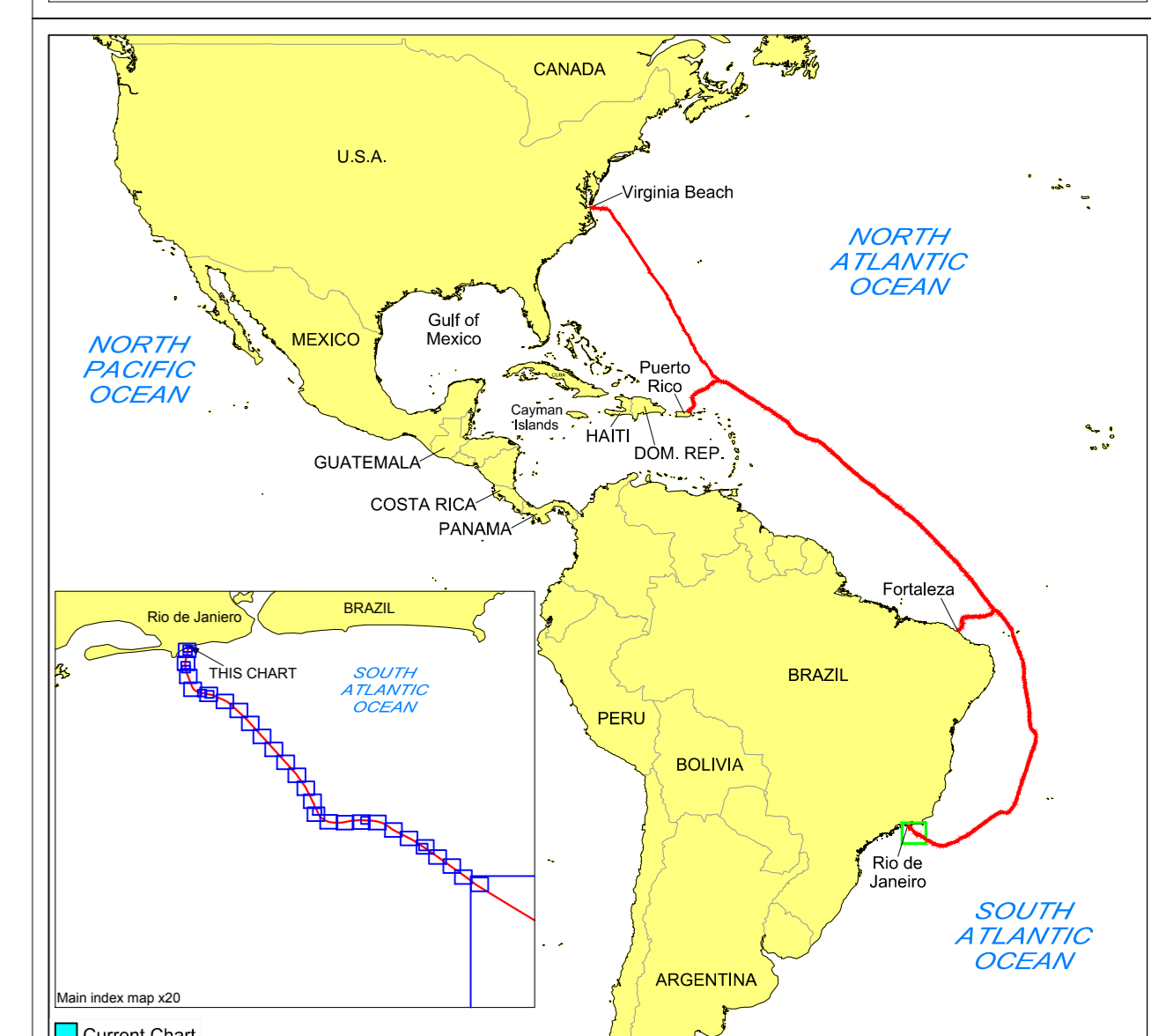
**Descriptive Terms and Definitions:** The criteria used for interpretation and descriptions are presented in the Survey Results

**Multi-beam 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 : 1,000 at 7°N

(At Mid-Latitude of Chart)  
 TRUE SCALE 1 : 927.63 m

Purchaser: **TELXIUS**  
 Building Connectivity

Contractor: **Alcatel-Lucent**  
 Surveyor: **Gardline**

Project Name: **BRUSA CABLE ROUTE SURVEY**

Document Title: **SEGMENT 7 NORTH-UP CHART CHART NO. 071 OF 071 (KP 3661.934 - KP 3662.930)**

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**REVISION 01**