

### CARTOGRAPHIC SYMBOLS

	Post Survey Route with kilometre post and reverse kilometre post		Telecommunications cable position, in Service/Out of Service/Planned (As found in magnetic)
	Beach Mark		Pipeline position, in Service/Out of Service/Planned (As found in magnetic)
	Alter Course		Power cable position, in Service/Out of Service (As found in magnetic)
	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/nh = no measurable height)
	Gas seepage area with predominant sediment classification		Linear sonar contact, dashed where partially buried
	Boulders 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)		OS (Diver Sample) DS (Diver Sample) DP (Diver Profile) SP (Beam Profile)
	Subsiding ROCK with predominant sediment classification (bedrock thickness = target burial depth)		Mn/CPT (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 POCKMARK 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
	Charted or reported wreck		Fault with depth below seafloor (fractures on down side)
	Dumping ground database position		Isobath Contours shown at 1m interval with labels every 1m
	Well / Platform		Anchorage Area / Fishing Area (Admiralty chart position)
	Oil Concession Block		Anchorage / Fishing Prohibited (Admiralty chart position)

**CHART COMMENT:**

### GENERAL NOTES:

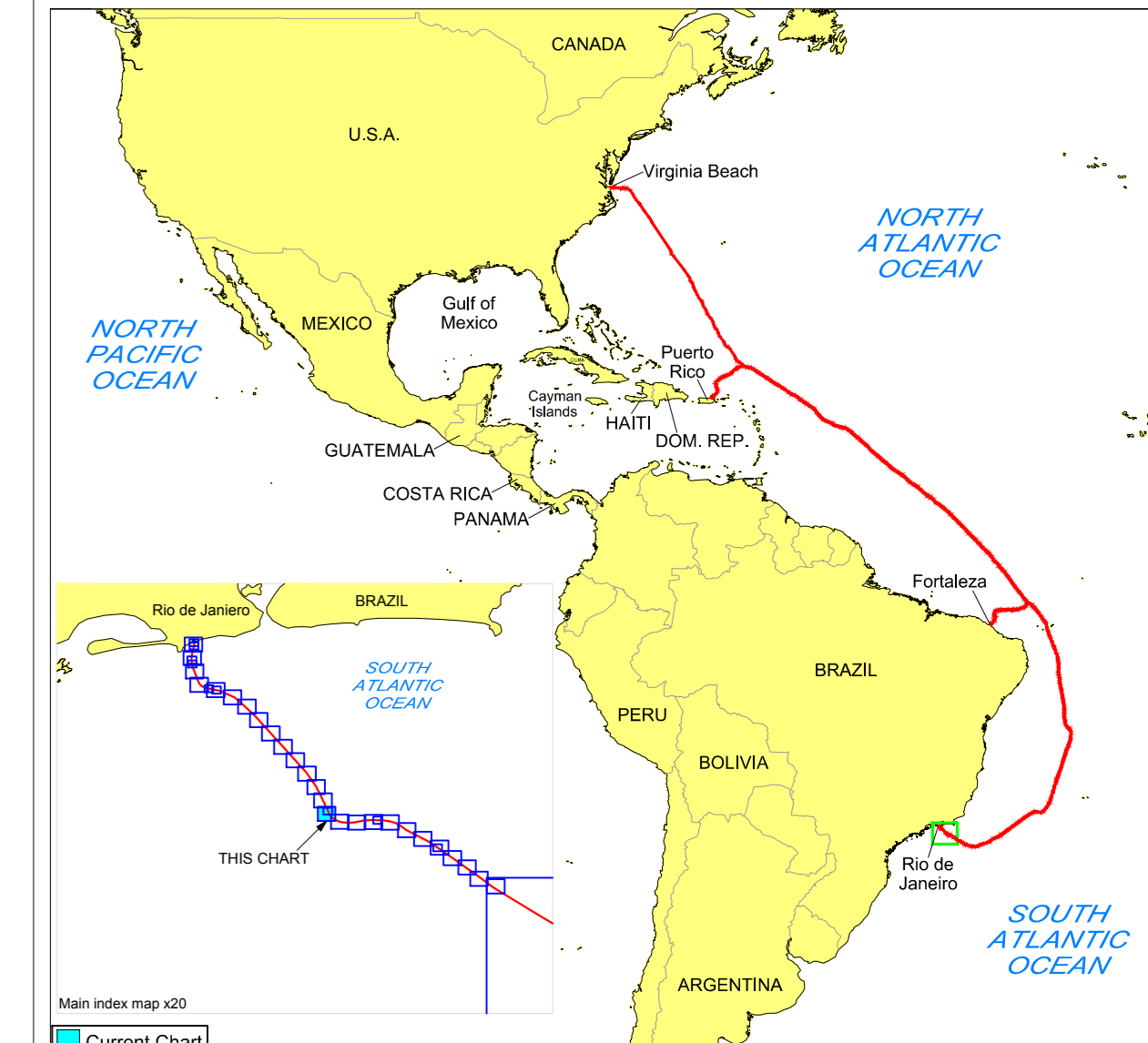
<b>SURVEY VESSEL</b>	M.V. Ocean Endeavour	M.V. Capibó Rio III
<b>Surface positioning system</b>	Furuno Starfix HP 1000S	Applanix POSMV Watermaster, Verpos LDS
<b>Underwater positioning system</b>	Sonarteq Fingert 1 USBL	Roson Seabat T-20
<b>Bathymetry</b>	Kongsberg EM1002	Kongsberg EM1002
<b>Morphology and stratigraphy</b>	Edgetech 4200-FS	Edgetech 4200 MP
<b>Magnetometer survey</b>	Geometrics S82	Geometrics S82
<b>Geotechnical</b>	Kullenberg Proton Core, Neptune 3000 CPT	Marine Magnetics Seateq, 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

**NATURAL SCALE 1 : 10,000 at 7°N**

(At Mid-Latitude of Chart)  
 TRUE SCALE 1 : 9221.36 km

**TELXIUS**

**Alcatel-Lucent**

**Gardline**

Project Name: BRUSA CABLE ROUTE SURVEY

Document Title: SEGMENT 7 NORTH-UP CHART CHART NO. 055 OF 071 (KP 3539.275 - KP 3547.879)

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**REVISION 01**

ROUTE BASED UPON: BRUSA PSR02 File Name: BRUSA.S7.NU055