

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 Markhole		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 fair weather)
	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)		OC (Piton Core)
	Submerged ROCK with predominant sediment classification (sediment thickness = target burial depth)		OS (Diver Sample)
	ROCK outcrop		DP (Diver Probing)
	HARDGROUND (Very dense/silicified sediment)		Mx/CPT (CPT) Location with reference number
	Sediment or feature boundary		Small outcrop of rock with height in metres if discernible
	Inferred Sediment or Feature Boundary		Seabed DEPRESSION or POCKMARK with diameter (d) and depth (D) in metres, where discernible
	Approximate limit of side scan sonar coverage and survey swath		Orientation of SANDWAVE crest (with wavelength and height in metres)
	Seabed scar (trail or anchor)		Orientation of MEGARIPPLE crest (with wavelength and height in metres)
	Charted or reported wreck		Orientation of sediment ribbon
	Dumping ground database position		Fault with depth below seafloor (fractures on down side)
	Wall / Platform		Located wreck with reference no. (length x width x height in metres where measurable)
	Oil Concession Block		Anchorage Area / Fishing Area (Admiralty chart position)
			Anchorage / Fishing Prohibited (Admiralty chart position)

CHART COMMENT:

GENERAL NOTES:

SURVEY VESSEL: M.V. Ocean Endeavour
Surface positioning system: Furuno Starfix HP 1500SS
Underwater positioning system: Sontar/Starfix T1 USBL
Bathymetry: Kongsberg EM1002, Kongsberg EM1202, Kongsberg EM60 Combi
Morphology and stratigraphy: Edgetech 4200 FS, Kongsberg Chirp and prap, SEB Seaprobe SSS/SBP
Magnetometer survey: Geometrics S82
Geotechnical: Kullenberg Piton Core, Neptune 3000 CPT

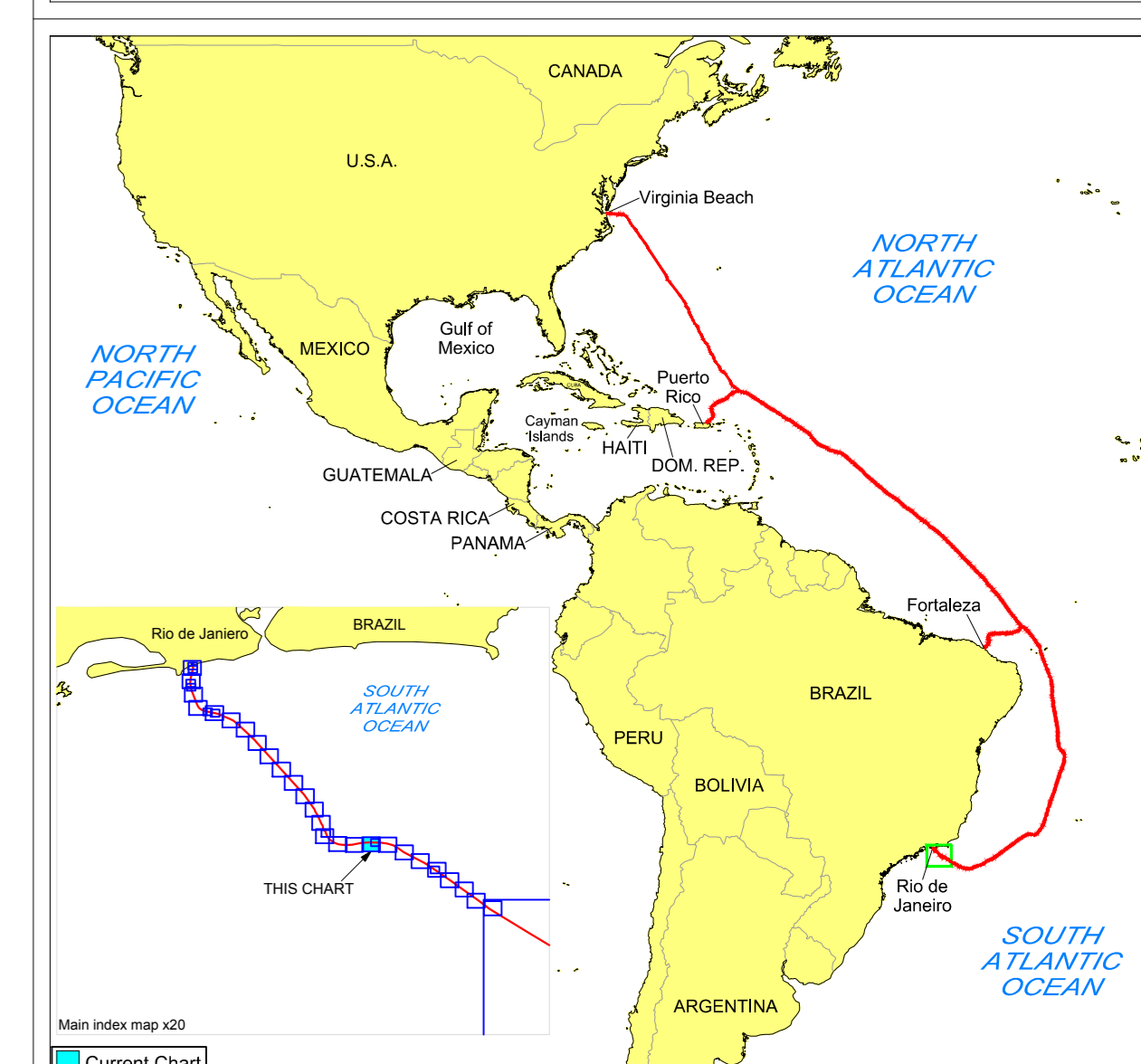
Target burial depth: 1.0m below seabed

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
 Longitude of Origin: 53°W
 Standard Parallel: 7°N
 Semi-Major Axis (a) (metres): 6378137.000
 Reciprocal Flattening (1/f): 298.257223563

Scale Factor: 1
Datum: WGS84
False Easting: 3 000 000
False Northing: 5 000 000



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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 : 9218.76 km

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

Project Name: **BRUSA CABLE ROUTE SURVEY**

Document Title: **SEGMENT 7 NORTH-UP CHART CHART NO. 052 OF 071 (KP 3515.515 - KP 3524.374)**

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REVISION 01