

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 (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		Linear sonar contact, dashed where partially buried
	Gas seepage area with predominant sediment classification		Unidentified magnetic anomaly with reference number and amplitude
	Boilers with predominant sediment classification		Cable/Pipeline position, as determined by magnetometer, with reference number and amplitude
	Fine sediment (predominantly CLAY/SILT)		Seabed sample location with reference number
	Coarse sediment (SAND and GRAVEL)		OS (Diver Core)
	Very coarse sediment (COBBLES and BOULDERS)		DS (Diver Sample)
	Submerged ROCK with predominant sediment classification (sediment thickness = target burial depth)		DP (Diver Probing)
	ROCK outcrop		Mn/CPT (CP), Location with reference number
	HARDGROUND (Very dense/consolidated sediment)		Small outcrop of rock with height in metres if discernible
	Sediment or feature boundary		Seabed DEPRESSION or POCKMARK with diameter (d) and depth (D) in metres, where discernible
	Inferred Sediment or Feature Boundary		Orientation of SANDWAVE crest (with wavelength and height in metres)
	Approximate limit of side scan sonar coverage and survey swath		Orientation of MEGARIPPLE crest (with wavelength and height in metres)
	Seabed scar (trail or anchor)		Fault with depth below seafloor (fractures 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. (width x length 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
Surface positioning system: Furgo Starfix HP 1500S
Underwater positioning system: Sonarbyte Ranger 1 USBL, Kongsberg EM1002, Kongsberg EM3002, Kongsberg EM600 Combi
Morphology and stratigraphy: Edgetech 4200-FS, Kongsberg Chirp and prap, SEB Seaprobe SSS/SBP, Geometrics S12
Magnetometer survey: Kullenberg Proton Core, Neptune 3000 CPT

M.V. Capito Eng III
Applied: POSMV Watermaster, Verpos LDS
Reson Seabat T-20

Edgetech 4200 MP
Kongsberg Geosonics
Geopulse
Marine Magnetics Seaguy
Van Veen Grab Sampler

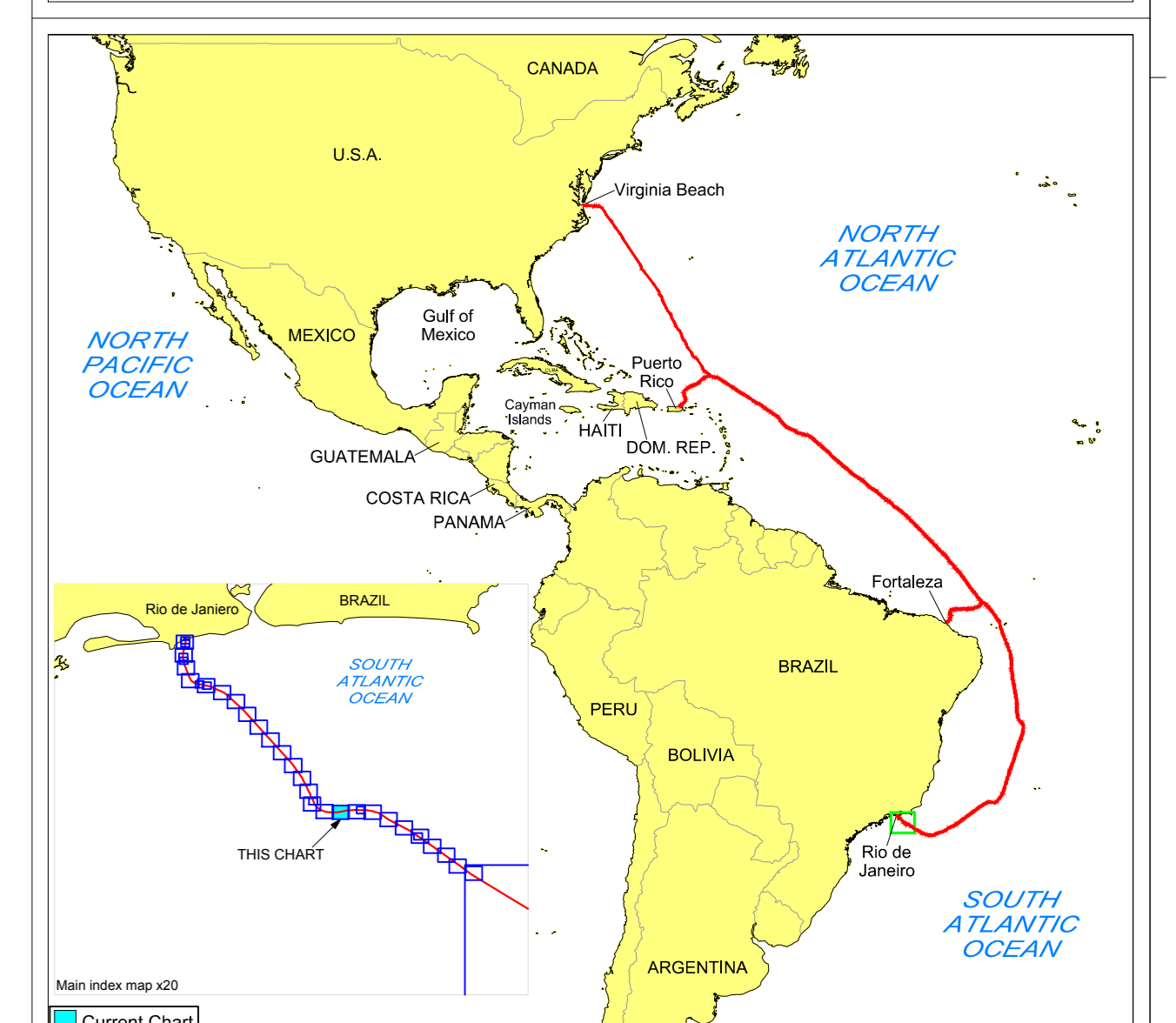
Target burial depth: 1.0m below seabed

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
 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 : 9218.64 km

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

Project Name: **BRUSA CABLE ROUTE SURVEY**

Document Title: **SEGMENT 7 NORTH-UP CHART CHART NO. 053 OF 071 (KP 3523.912 - KP 3532.860)**

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REVISION 01