

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/line		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 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)		OC (Piston Core)
	Subseafloor ROCK with predominant sediment classification (sediment thickness + target burial depth)		OS (Grab Sample)
	ROCK outcrop		DP (Diver Probing)
	HARDGROUND (Very dense/silicified/consolidated sediment)		MiniCPT (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 ROCKMARK 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 (trawl or anchor)		Orientation of MEGARIPPLE crest (with wavelength and height in metres)
	Charted or reported wreck		Fault with depth below seafloor (fluctuates on down side)
	Dumping ground database position		Isobath Contours shown at 1m interval with labels every 1m
	Well / 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, M.V. Capito Eng III, M.V. Capito Eng III
 Fugro Starline HP USASIS, Fugro POSBY WaveMaster, Verpos LDS

Underwater positioning System: Scantwyler Ranger 1 USBL, Reson Seabat T-20

Bathymetry: Kongsberg EM100, Kongsberg EM100, Edgetech 4200-FS, Edgetech 4200 MP, Kongsberg Geosacros, Kongsberg Geosacros, SEB Seaglobe SSS/SBP, Geopulse, Geopulse, Kullenberg Pison Core, Marine Magnetics Seagay, Van Veen Grab Sampler, Neptune 3000 CPT

Morphology and stratigraphy: Edgetech 4200-FS, Edgetech 4200 MP, Kongsberg Geosacros, Kongsberg Geosacros, SEB Seaglobe SSS/SBP, Geopulse, Geopulse, Kullenberg Pison Core, Marine Magnetics Seagay, Van Veen Grab Sampler, Neptune 3000 CPT

Geotechnical: Kullenberg Pison Core, Neptune 3000 CPT

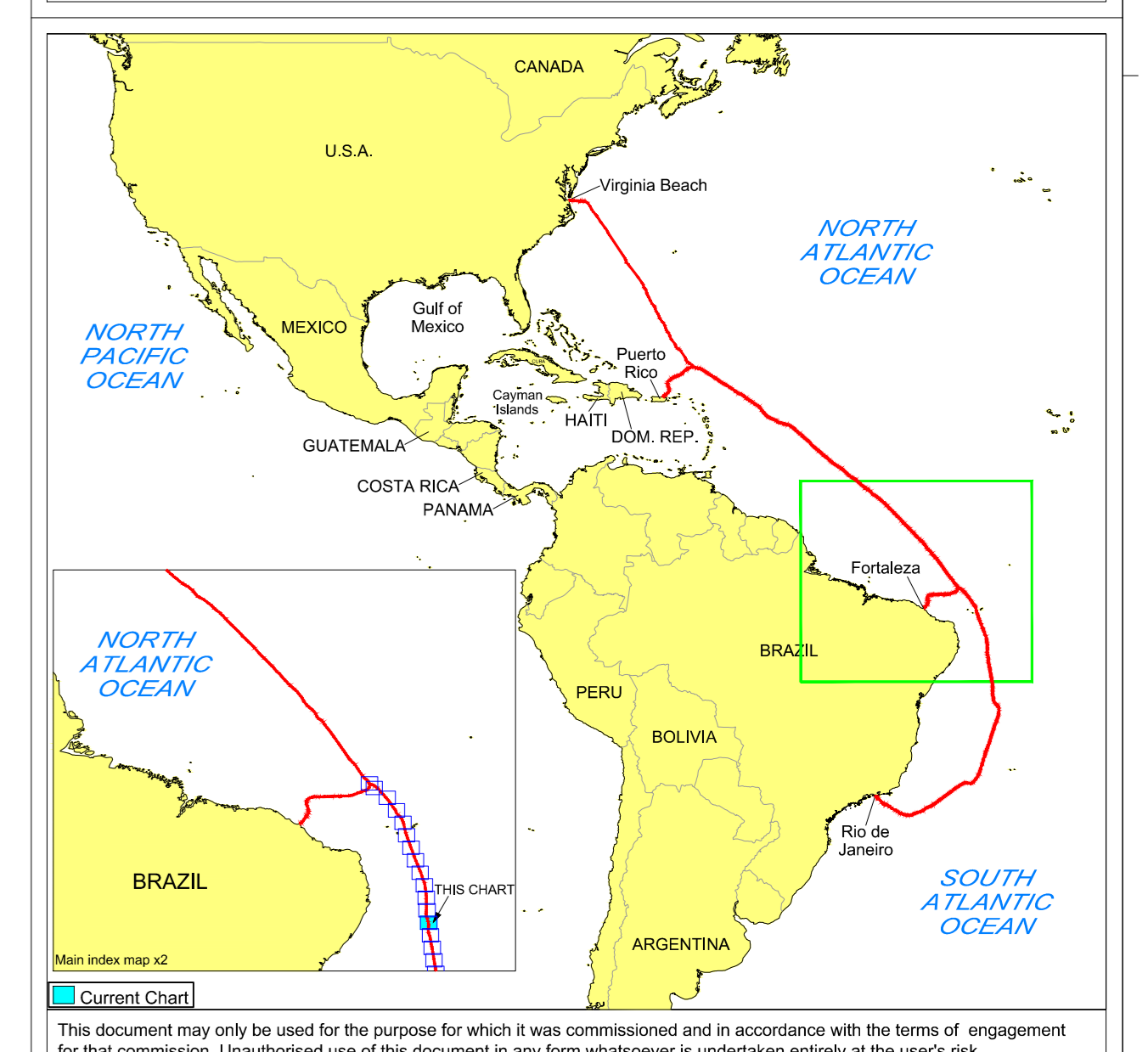
Target burial depth: 1.0m below seabed

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

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, Datum: WGS84, Longitude of Origin: 73°W, False Easting: 3 200 000, Standard Parallel: 7°N, 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 : 100,000 at 7°N**

(At Mid-Latitude of Chart)
 TRUE SCALE 1 : 99922.46 km

Purchaser: **TELXIUS** (Enabling Connectivity)

Contractor: **Alcatel-Lucent**

Surveyor: **Gardline**

Project Name: **BRUSA CABLE ROUTE SURVEY**

Document Title: **SEGMENT 7 NORTH-UP CHART CHART NO. 012 OF 071 (KP 881.851 - KP 961.825)**

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REVISION 01