

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/Alter Course		Pipeline position, in Service/Out of Service/Planned (As found in magenta)
	Survey Route		Power cable position, in Service/Out of Service (As found in magenta)
	Coastline (from Admiralty Charts)		Chart Matchline
			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)

Downslope gradient in degrees (°) as measured over the shortest significant distance

Approximate limit of swath bathymetry coverage (shown only in areas of fair seabed)

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: CC (Piston Core), OS (Grab Sample), DS (Diver Sample), DP (Diver Probing), SP (Beach Probing)
	Very coarse sediment (COBBLES and BOULDERS)		MiniCPT (CPT) Location with reference number
	Submerged ROCK with predominant sediment classification (sediment thickness = target burial depth)		Small outcrop of rock with height in metres if discernible
	ROCK outcrop		Seabed DEPRESSION or ROCKMARK with diameter (d) and depth (D) in metres, where discernible
	HARDGROUND (Very dense/consolidated sediment)		Seabed DEPRESSION or ROCKMARK 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
	Seabed scar (trawl or anchor)		Fault with depth below seafloor (Hachures 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. (length x width 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: Furto Staro HP 15048S	M.V. Ocean Endeavour M.V. Capibó Eng III Aplicar ROSAV WaveMaster, Verpos LDS
Underwater positioning System: Kongsberg EM120	Reson Seabat T-20
Bathymetry: Kongsberg EM120 Kongsberg EM60 Combi	
Morphology and stratigraphy: Edgetech 4200-FS Kongsberg Chirp and prap SES Seaglobe SSS/SBP Geomatrix S&Z	Edgetech 4200 MP Kongsberg Geosoundics Geopulse Marine Magnetics Seagrey
Magnetometer survey: Kullenberg Proton Core	Van Veen Grab Sampler
Geotechnical: Neptune 3000 CPT	

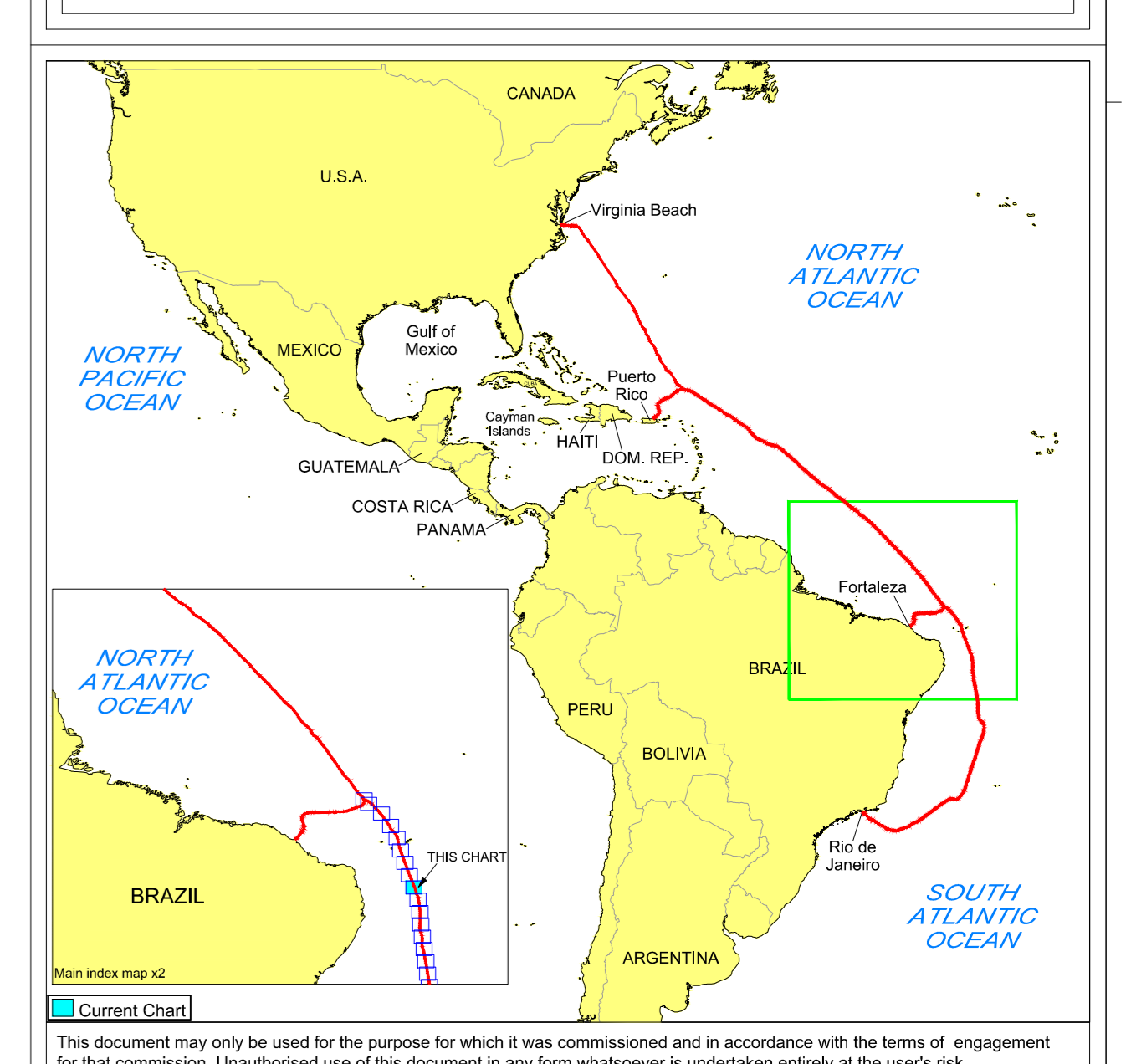
Target burial depth: 1.0m below seabed

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
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 : 100,000 at 7°N

(At Mid-Latitude of Chart)
TRUE SCALE 1 : 100 38.46 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. 008 OF 071 (KP 582.042 - KP 665.271)**

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REVISION 01