

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		Isolated sonar contact with reference number (length x width x height in metres where measurable; n/m = 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)		Identified magnetic anomaly, 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 (Grab Sample) DS (Diver Sample) DP (Diver Probe) SP (Beach Probe)
	Subsiding ROCK with predominant sediment classification (sediment 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/silt/consolidated sediment)		Seabed DEPRESSION or POC/MARK 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 (trail or anchor)		Fault with depth below seabed (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: M.V. Ocean Endeavour	M.V. Capito Rio III
Surface positioning system: Fujiro Starlink HP 1000S	Applan POSMV WaveMaster, Verpos LDS
Underwater positioning System: Kongsberg Fingert 1 USBL	Reson Seabat T-20
Bathymetry: Kongsberg EM1002	
Morphology and stratigraphy: Edgetech 4200-FS	Edgetech 4200 MP
Geotechnical: Kongsberg Coda and pager, SES Seaglobe SSS/SBP	Kongsberg Geoscoastics
Magnetometer survey: Geomatrix S82	Diapulse
Geotechnical: Kullenberg Pluton Core, Neptune 3000 CPT	Marine Magnetics Seagray Van Veen Grab Sampler

Target burial depth: 1 m below seabed

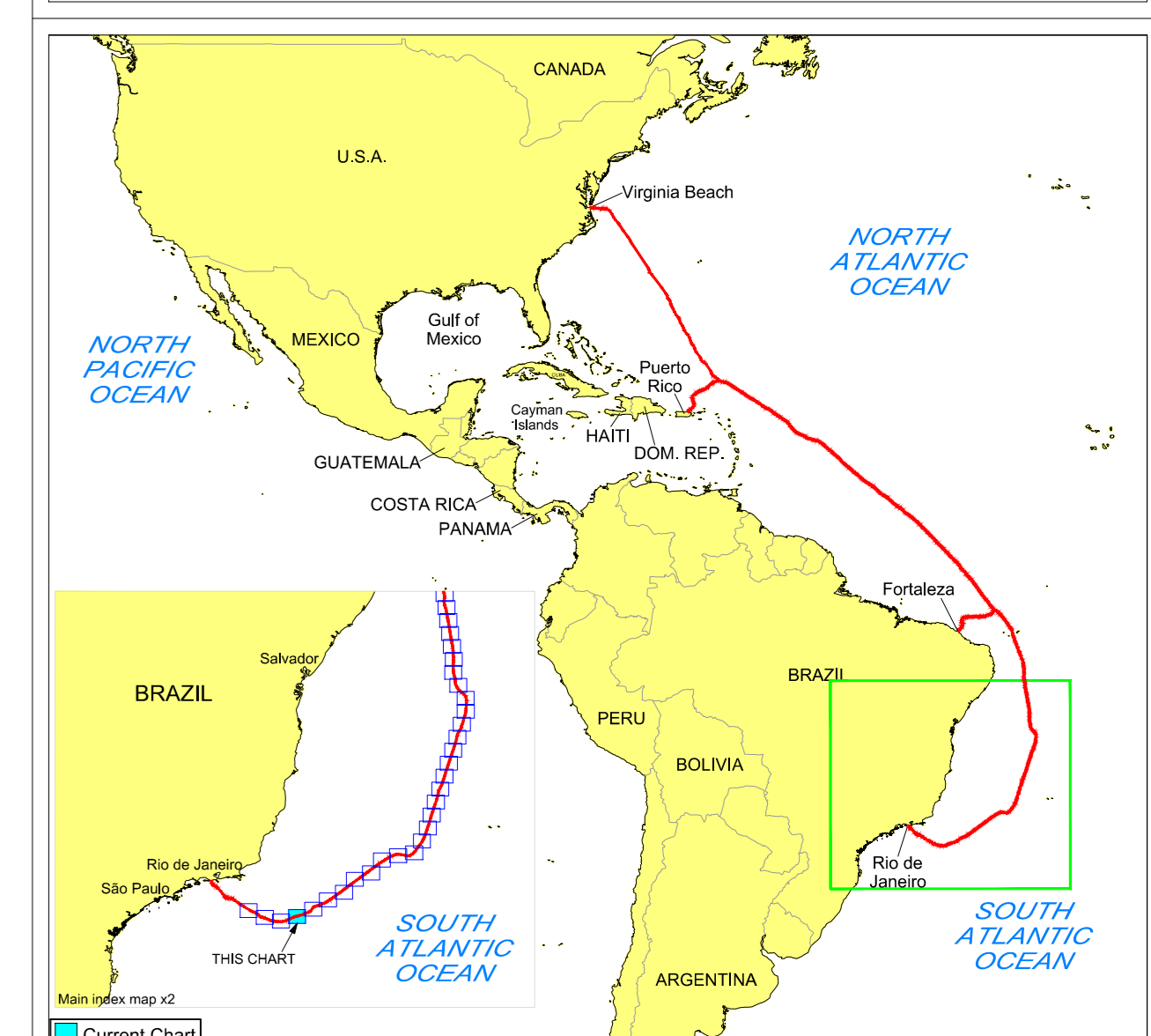
Descriptive Terms and Definitions:
The criteria used for interpretation and descriptions are presented in the Survey Results

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 : 91872.4 km

Purchase: **TELXIUS** (Enabling Connectivity)

Contractor: **Alcatel-Lucent**

Surveyor: **Gardline**

Project Name: **BRUSA CABLE ROUTE SURVEY**

Document Title: **SEGMENT 7 NORTH-UP CHART CHART NO. 040 OF 071 (KP 3085.044 - KP 3178.555)**

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REVISION 01