

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).

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

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

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)		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)		OS (Grab Sample) DS (Diver Sample) DP (Diver Probe) SP (Beach Probed)
	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/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 (trail 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: M.V. Ocean Endeavour / M.V. Capito Eng III

Surface positioning system: Furgo Starline HP 1500SS / Applan POSMV WaveMaster, Verpos LDS

Underwater positioning System: Sontar/yr Fingert 1 USBL / Kongsberg EM1202 / Reson Seabat T-20

Bathymetry: Kongsberg EM1202 / Kongsberg EM60 Combi / Edgetech 4200 FS / Edgetech 4200 MP

Morphology and stratigraphy: Kongsberg Chirp and prapgr. / Kongsberg Geosoundics

Magnetometer survey: GEOMAR S82 / Marine Magnetics Seagay

Geotechnical: Kullenberg Piston Core, Neptune 3000 CPT / 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

Multi-beam Processing Parameters: Depths in metres, reduced to LAT

Predictions used from tide stations: Rio de Janeiro, Brazil

GEODETIC PARAMETERS:

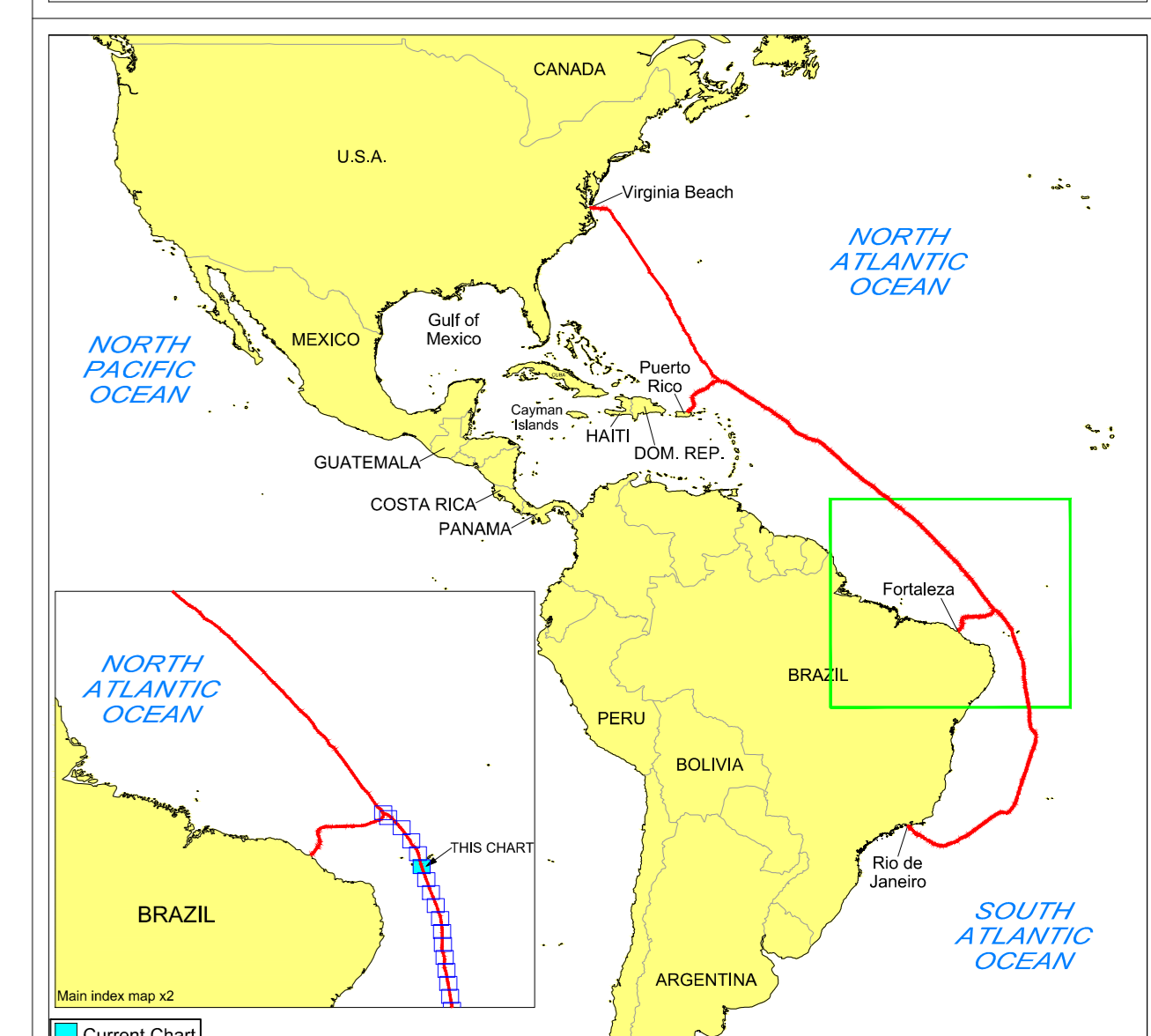
Projection: MERCATOR Scale Factor: 1

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 : 100486.29 km

Purchase: TELXIUS Contractor: Alcatel-Lucent

Surveyor: Gardline

Project Name: BRUSA CABLE ROUTE SURVEY

Document Title: SEGMENT 7 NORTH-UP CHART CHART NO. 005 OF 071 (KP 348 270 - KP 430 649)

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REVISION 01