

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		Linear sonar contact, dished where partially buried
	Gas seepage area with predominant sediment classification		Unidentified magnetic anomaly with reference number and amplitude
	Boulders 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 (Grab Sample) DS (Diver Sample) DP (Diver Probe) SP (Beach Probe)
	Very coarse sediment (COBBLES and BOULDERS)		Min/CPT (CP) Location with reference number
	Subsiding 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 POCKMARK with diameter (d) and depth (D) in metres, where discernible
	HARDGROUND (Very dense/consolidated sediment)		Orientation of SANDWAVE crest (with wavelength and height in metres)
	Sediment or feature boundary		Orientation of MEGARIPPLE crest (with wavelength and height in metres)
	Inferred Sediment or Feature Boundary		Orientation of sediment ribbon
	Approximate limit of side scan sonar coverage and survey swath		Fault with depth below seafloor (fractures on down side)
	Seabed scar (trail or anchor)		Charted or reported wreck
	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 Rio III, M.V. Capito Rio III
 Surface positioning system: Fugro Starbuck HP 1000SS, Applan POSMV Watermaster, Verpos LDS
 Underwater positioning system: Sonarbyte Ranger 1 USBL, Reson Seabat T-20
 Bathymetry: Kongsberg EM100, Kongsberg EM120, Kongsberg EM1200, Edgetech 4200 FS, Edgetech 4200 MP, Kleinbow Coda and pager, Kongsberg Oceanosics, SIB Seaprobe SSS/SBP, Oceanulise, Geometrics S82, Marine Magnetics Seateq, Kullenberg Photon Core, Van Veen Grab Sampler, Neptune 3000 CPT

Morphology and stratigraphy: Edgetech 4200 FS, Edgetech 4200 MP, Kleinbow Coda and pager, Kongsberg Oceanosics, SIB Seaprobe SSS/SBP, Oceanulise, Geometrics S82, Marine Magnetics Seateq, Kullenberg Photon Core, Van Veen Grab Sampler, Neptune 3000 CPT

Geotechnical: Van Veen Grab Sampler, Neptune 3000 CPT

Target burial depth: 1.0m below seabed

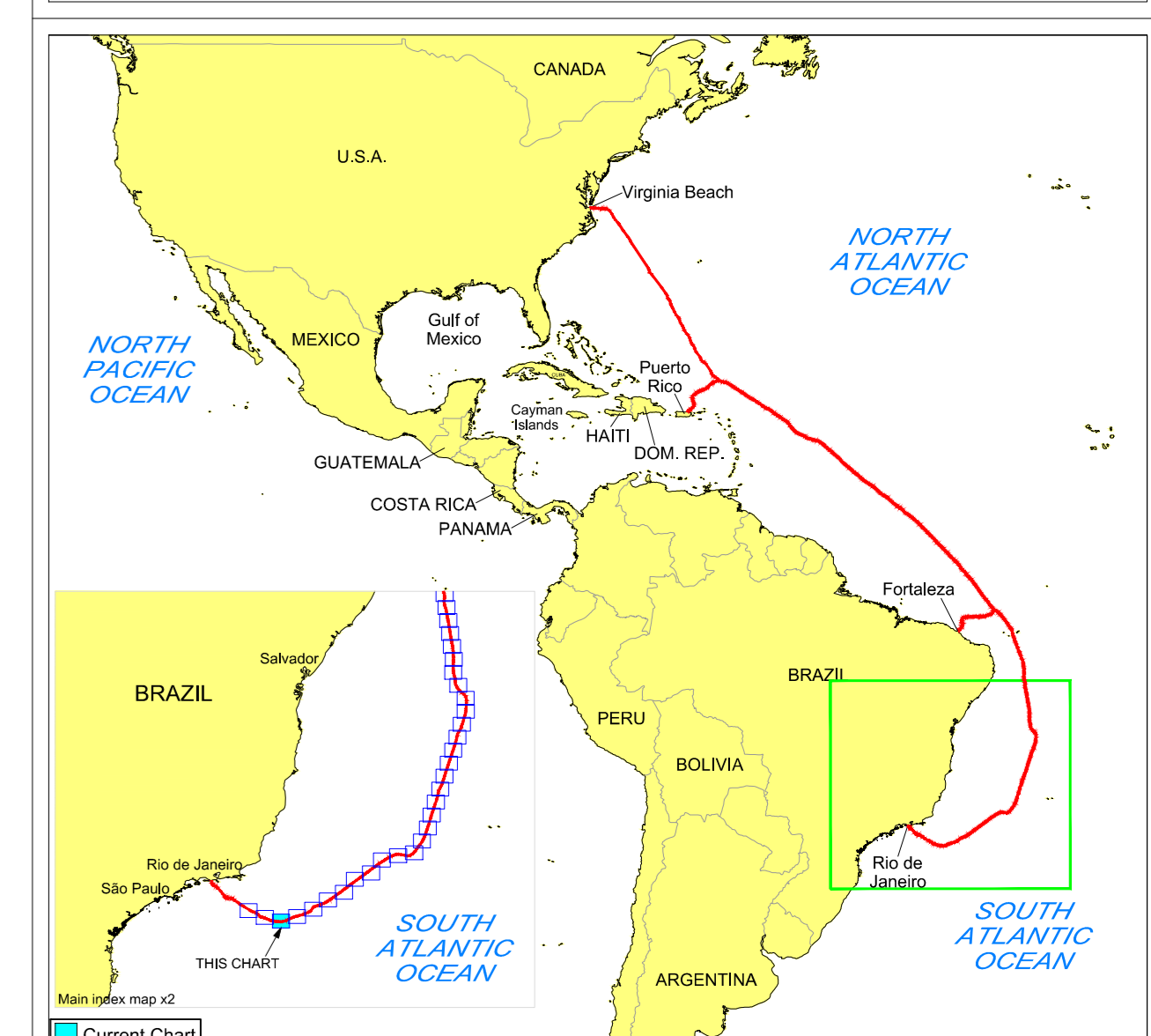
Descriptive Terms and Definitions:
 The criteria used for interpretation and descriptions are presented in the Survey Results

Multi-beam 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 : 100,000 at 7°N
 (At Mid-Latitude of Chart)
 TITLE SCALE 1 : 91477.43km

Purchase: **TELXIUS** (Enabling Connectivity)

Contractor: **Alcatel-Lucent**

Surveyor: **Gardline**

Project Name: **BRUSA CABLE ROUTE SURVEY**

Document Title: **SEGMENT 7 NORTH-UP CHART CHART NO. 041 OF 071 (KP 3173.478 - KP 3264.208)**

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REVISION 01