

CARTOGRAPHIC SYMBOLS

	Telecommunications cable position, in Service/Out of Service/Planned (As found in magenta)
	Pipeline position, in Service/Out of Service/Planned (As found in magenta)
	Power cable position, in Service/Out of Service (As found in magenta)
	Chart Matchline
	Territorial Sea / EEZ limit

BATHYMETRY

	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/m = no measurable height)
	Gas seepage area with predominant sediment classification		Linear sonar contact, dashed where partially buried
	Fine sediment (predominantly CLAY/SILT)		Unidentified magnetic anomaly with reference number and amplitude
	Coarse sediment (SAND and GRAVEL)		Magnetometer, as determined by magnetometer, with reference number and amplitude
	Very coarse sediment (COBBLES and BOULDERS)		Seabed sample location with reference number (GC (Piston Core), GS (Grab Sample), DS (Diver Sample), DP (Diver Probing), SP (Beach Probing))
	Subsiding ROCK with predominant sediment classification (sediment thickness = target burial depth)		Mn/CPT (CPT) Location with reference number
	ROCK outcrop		Small outcrop of rock with height in metres if discernible
	HARDGROUND (Very dense/firm/consolidated sediment)		Seabed DEPRESSION or POCKMARK 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:

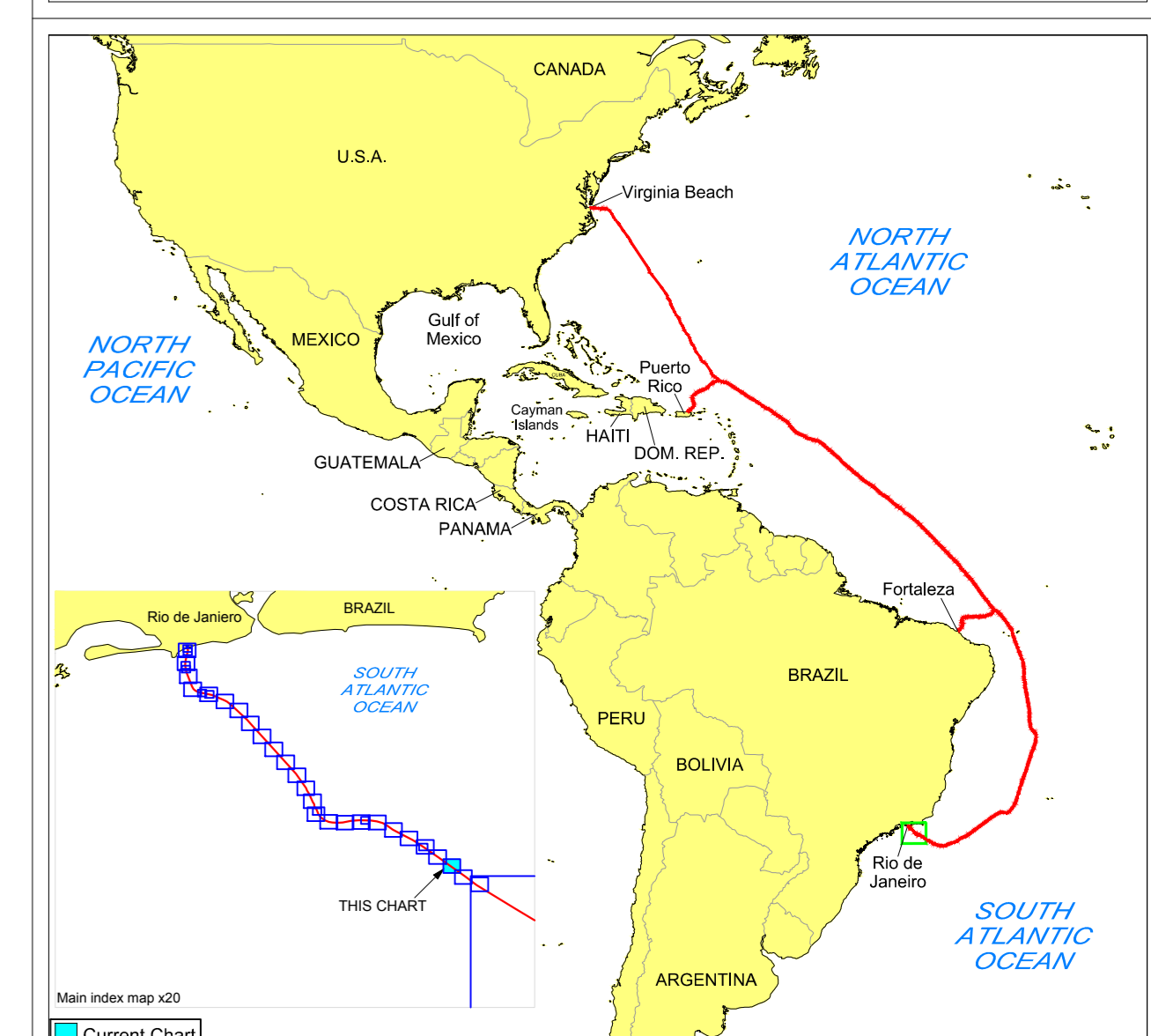
SURVEY VESSEL: M.V. Ocean Endeavour
Surface positioning system: Furuno Starfix HP 3000S
Underwater positioning system: Sonarteck Ranger 1 USBL
Bathymetry: Kongsberg EM1002, Kongsberg EM300, Kongsberg EM300 Combi, Reson Seabat T-20
Morphology and stratigraphy: Edgetech 4200-FS, Kongsberg Chirp and pinger, Edgetech 4200 MP, Kongsberg Geosoundics
Magnetometer survey: GEOMATEC M82, Marine Magnetics Saegye
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

GEODETTIC 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 : 10,000 at 7°N
 (At Mid-Latitude of Chart)
 TITLE SCALE: 1 : 9004.16km

Purchaser: **TELXIOUS**
 Contractor: **Alcatel-Lucent**
 Surveyor: **Gardline**

Project Name: **BRUSA CABLE ROUTE SURVEY**

Document Title: **SEGMENT 7 NORTH-UP CHART CHART NO. 046 OF 071 (KP 3460.723 - KP 3471.430)**

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REVISION 01