

CARTOGRAPHIC SYMBOLS

- Post Survey Route with kilometre post and reverse kilometre post
- Beach Markline
- Alter Course
- Survey Route
- Coastline (from Admiralty Charts)
- 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

- 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

Symbol	Description
cor	Coral
fac/svcs	Gas seepage area with predominant sediment classification
rb	Boulders with predominant sediment classification
fs	Fine sediment (predominantly CLAY/SILT)
cs	Coarse sediment (SAND and GRAVEL)
vc	Very coarse sediment (COBBLES and BOULDERS)
fs/svcs	Subsiding ROCK with predominant sediment classification (sediment thickness = target burial depth)
r	ROCK outcrop
ha	HARDGROUND (Very dense/silicified sediment)
sc	Sediment or feature boundary
inf	Inferred Sediment or Feature Boundary
sl	Approximate limit of side scan sonar coverage and survey swath
sc	Seabed scar (trail or anchor)
sc	Charted or reported wreck
sc	Dumping ground database position
sc	Well / Platform
sc	Oil Concession Block
sc	Isolated sonar contact with reference number (length x width x height in metres where measurable; n/n/n = no measurable height)
sc	Linear sonar contact, dashed where partially buried
sc	Unidentified magnetic anomaly with reference number and amplitude
sc	Cable/Pipeline position, as determined by magnetometer, with reference number and amplitude
sc	Seabed sample location with reference number
sc	OC (Open Core) OS (Grab Sample) DS (Diver Sample) DP (Diver Probing) SP (Beach Probing)
sc	Min/CPT (CP) Location with reference number
sc	Small outcrop of rock with height in metres if discernible
sc	Seabed DEPRESSION or POC/MARK with diameter (d) and depth (D) in metres, where discernible
sc	Orientation of SANDWAVE crest (with wavelength and height in metres)
sc	Orientation of MEGARIPPLE crest (with wavelength and height in metres)
sc	Orientation of sediment ribbon
sc	Fault with depth below seafloor (hachures on down side)
sc	Isobath Contours shown at 1m interval with labels every 1m
sc	Located wreck with reference no. (length x width x height in metres where measurable)
sc	Anchorage Area / Fishing Area (Admiralty chart position)
sc	Anchorage / Fishing Prohibited (Admiralty chart position)

CHART COMMENT:

GENERAL NOTES:

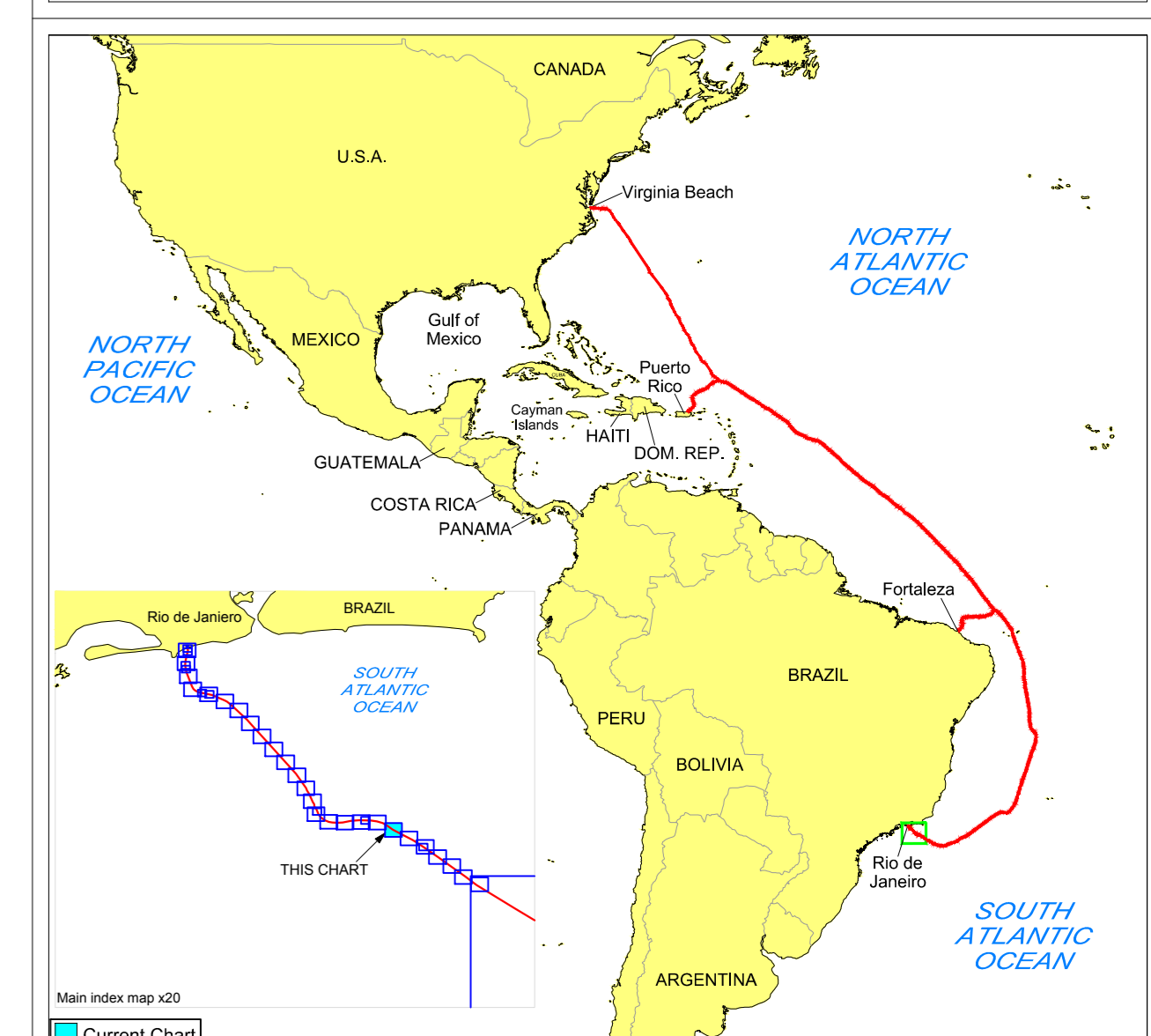
SURVEY VESSEL: M.V. Ocean Endeavour
Surface positioning system: Furuno Starfix HP 1500HS
Underwater positioning system: Seamount Ranger 1 USBL, Kongsberg EM1202, Kongsberg EM3002, Kongsberg EM600 Combi
Morphology and stratigraphy: Edgetech 4200-FS, Kongsberg Chirp and prap, SEB Seaprobe SSS/SBP, Geometrics S12
Magnetometer survey: Marine Magnetics Seapray, Kullenberg Proton Core, Neptune 3000 CPT
Geotechnical: M.V. Capito Eng III, Applus POSBY WaveMaster, Verpos LDS, Reson Seabat T-20, Edgetech 4200 MP, Kongsberg Geospectics, Oceanulise, Marine Magnetics Seapray, 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



This document may only be used for the purpose for which it was commissioned and in accordance with the terms of engagement for that commission. Unauthorised use of this document in any form whatsoever is under the entire liability of the user's risk.

Survey Date: MAY to AUGUST 2016

Scale: **NATURAL SCALE 1 : 10,000 at 7°N**

(At Mid-Latitude of Chart)
 TRUE SCALE 1 : 9216.16 km

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

Project Name: **BRUSA CABLE ROUTE SURVEY**

Document Title: **SEGMENT 7 NORTH-UP CHART CHART NO. 050 OF 071 (KP 3496.943 - KP 3507.247)**

Rev	Date	Prepared by	Checked by	Approved by
01	16.09.2016	JSRM	PB	CB
02	24.06.2016	JSRM	PB	CB

ROUTE BASED UPON: BRUSA PSR02 File Name: BRUSA.ST.NU050

REVISION 01