

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

SEABED FEATURES AND SHALLOW GEOLOGY

	Coral		Unidentified magnetic anomaly with reference number and amplitude
	Gas seepage area with predominant sediment classification		Cable/Pipeline position, as determined by magnetometer, with reference number and amplitude
	Blockers with predominant sediment classification		Seabed sample location with reference number: GC (Diver Core), GS (Diver Sample), DP (Diver Profile), SP (Beach Profile)
	Fine sediment (predominantly CLAY/SILT)		Magnetometer (CP), Location with reference number
	Coarse sediment (SAND and GRAVEL)		Small outcrop of rock with height in metres if discernible
	Very coarse sediment (COBBLES and BOULDERS)		Seabed DEPRESSION or POCKMARK with diameter (d) and depth (D) in metres, where discernible
	Subsiding ROCK with predominant sediment classification (sediment thickness = target burial depth)		Orientation of SANDWAVE crest (with wavelength and height in metres)
	ROCK outcrop		Orientation of MEGARIPPLE crest (with wavelength and height in metres)
	HARDGROUND (Very dense/consolidated sediment)		Orientation of sediment ribbon
	Sediment or feature boundary		Fault with depth below seafloor (Hachures on down side)
	Inferred Sediment or Feature Boundary		Isobath Contours shown at 1m interval with labels every 1m
	Approximate limit of side scan sonar coverage and survey swath		Located wreck with reference no. (length x width x height in metres where measurable)
	Seabed scar (trail or anchor)		Anchorage Area / Fishing Area (Admiralty chart position)
	Charted or reported wreck		Anchorage / Fishing Prohibited (Admiralty chart position)
	Dumping ground database position		
	Well / Platform		
	Oil Concession Block		

CHART COMMENT:

GENERAL NOTES:

SURVEY VESSEL: M.V. Ocean Endeavour / M.V. Capibó Eng III
Surface positioning system: Furgo Star 1HP USNS / Applan POSMV Watermaster, Verpos LDS
Underwater positioning system: Sontar Ranger 1 USBL / Reson Seabat T-20
Bathymetry: Kongsberg EM100 / Kongsberg EM120 / Edgetech 4200 FS / Edgetech 4200 MP
Morphology and stratigraphy: Kongsberg Chirp and prap / Kongsberg Geosonics
Geometrics: SSS/SBP / Marine Magnetics Seagay
Geotechnical: Kullenberg Piston Core, Neptune 3000 CPT / Van Veen Grab Sampler

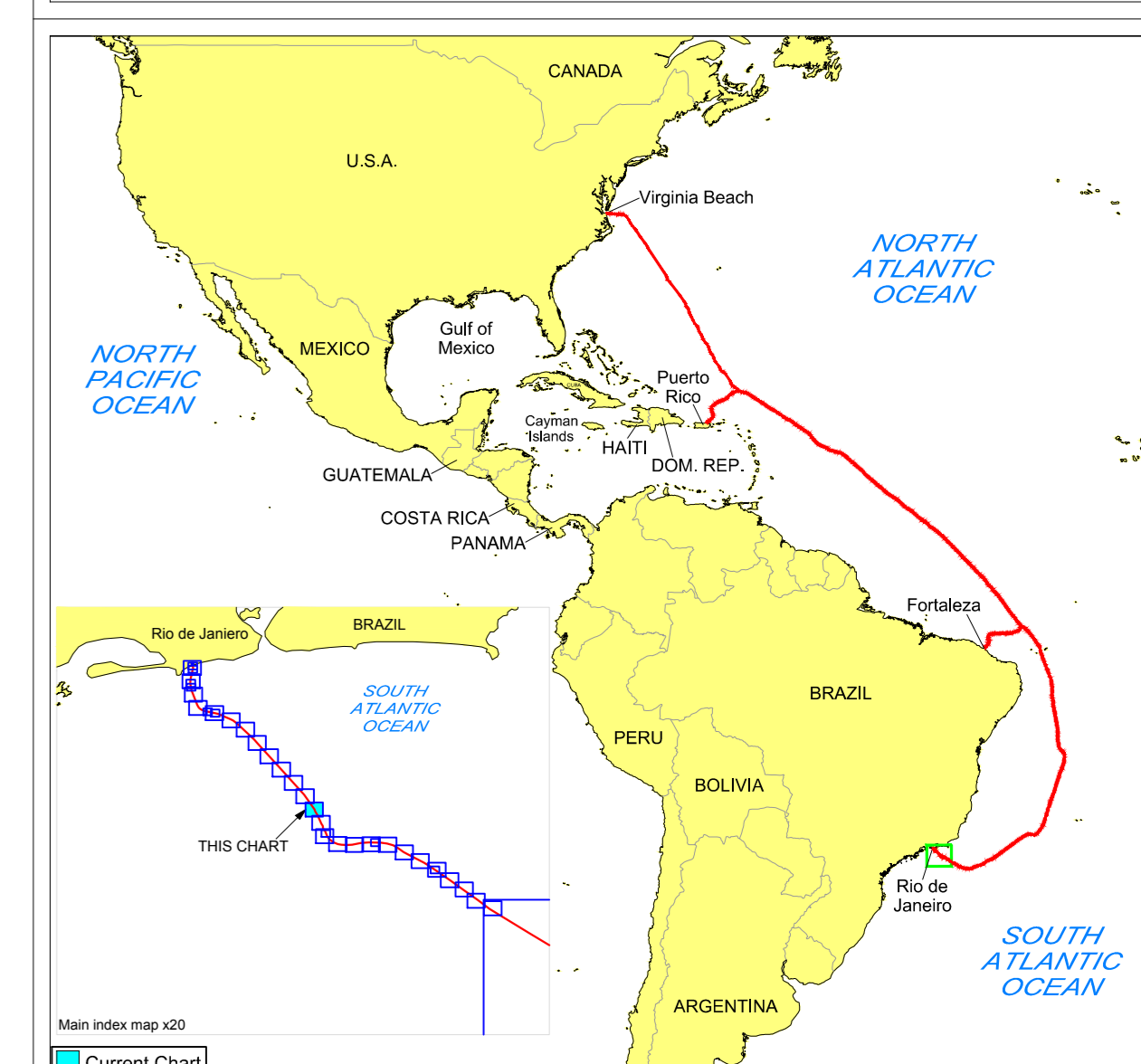
Target burial depth: 1.0m below seabed

Descriptive Terms and Definitions:
 The criteria used for interpretation and descriptions are presented in the Survey Results
Multibeam 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): 298.257222563

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 Mean Low Water of Chart)
 TRUE SCALE 1 : 9209.90 km

TELXIUS (Enabling Connectivity) | **Alcatel-Lucent** | **Gardline**

Project Name: **BRUSA CABLE ROUTE SURVEY**

Document Title: **SEGMENT 7 NORTH-UP CHART CHART NO. 057 OF 071 (KP 3554.728 - KP 3563.185)**

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Rev Date Prepared by Checked by Approved by

ROUTE BASED UPON: BRUSA PRR02 | File Name: BRUSA.S7.NU057

REVISION 01