

CARTOGRAPHIC SYMBOLS

	Post survey route with kilometre post and reverse kilometre post		Telecommunications cable position, in-survey/Out-of-survey/Planned (As found in magnet)
	After course / Point on line / Beach marker (BM)		Fishing gear position, in-survey/Out-of-survey/Planned (As found in magnet)
	Contractual route		Power cable position, in-survey/Out-of-survey/Planned (As found in magnet)
	Chart machine		Marine cable
	Coastline (from Admiralty Charts)		Maritime boundaries
	Submerged wreck / Exposed wreck / Obstruction / Well / Platform / Explosives dumping ground and symbol of line feature in grey, shifted from deck top study (as found in magnet) (for general symbols and abbreviations refer to British Admiralty Chart)		

BATHYMETRY

	Bathymetric contours in metres. Contour interval may be reduced to 1m in clarity		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		Isolated sewer contact with reference no. (length x width x height in metres where measurable; min = no measurable height)
	Gas seepage area with predominant sediment classification		Linear sewer contact, dashed where partially buried
	Boulders with predominant sediment classification		Unidentified magnetic anomaly with reference number and amplitude in nanotesla (nT)
	Fine sediment (predominantly CLAY/SILT)		Cable/Pipeline position, as determined by magnetometer, with reference number and amplitude in nanotesla (nT)
	Coarse sediment (SAND and GRAVEL)		Located wreck with reference no. (length x width x height in metres where measurable)
	Very coarse sediment (COBBLES and BOULDERS)		Seabed sample location with ref. no.: (Gravel Core) (PC Pellet Core) (GS (Sea-Sensor)) (DS (Sea-Sensor)) (DP (Seabed Probing)) (BP (Seabed Probing))
	Submerged ROCK with predominant sediment classification (sediment thickness < target burial depth)		CPT location with reference number
	ROCK outcrop (with veneer of sediments)		Small outcrop of rock with height in metres if discernible
	HARDGROUND (very dense/very stiff) consolidated sediment (sediment thickness < target burial depth)		Seabed depression or pocketmark with diameter (D) and depth (D) in metres, where discernible
	Sediment or feature boundary		General orientation of sandwave crest (fractures on lee side where observable, with wavelength and height in metres)
	Inferred sediment or feature boundary		Orientation of megapole crest (fractures on lee side where observable, with wavelength and height in metres)
	Approximate limit of side scan coverage		Orientation of sediment ribbon
	Seabed scar or trail scar		Fault with depth below seabed (fractures on footwall)
	Anchor scar		

SHALLOW GEOLOGY PROFILE

CHART COMMENTS:

Cable and Pipeline Crossing:
 CX 005 TELE (Crossing) (Station No:2) (RPL Database), KP: 28.435, water depth: 1414 m, crossing angle: 57°
 CX IS FO SAGRES (as found by MAG), KP: 32.139, water depth: 1293 m, crossing angle: 75°

Hazardous Features:
 The charted sediments in the northeastern area comprise very soft CLAY with isolated boulders. Slope gradients are gentle to moderate but become steeper in places up to 20° further to the west where they are present with numerous shallow scars (probably fishing gear related) and isolated fishing gear is scattered on the seabed with preferential along slope orientation.

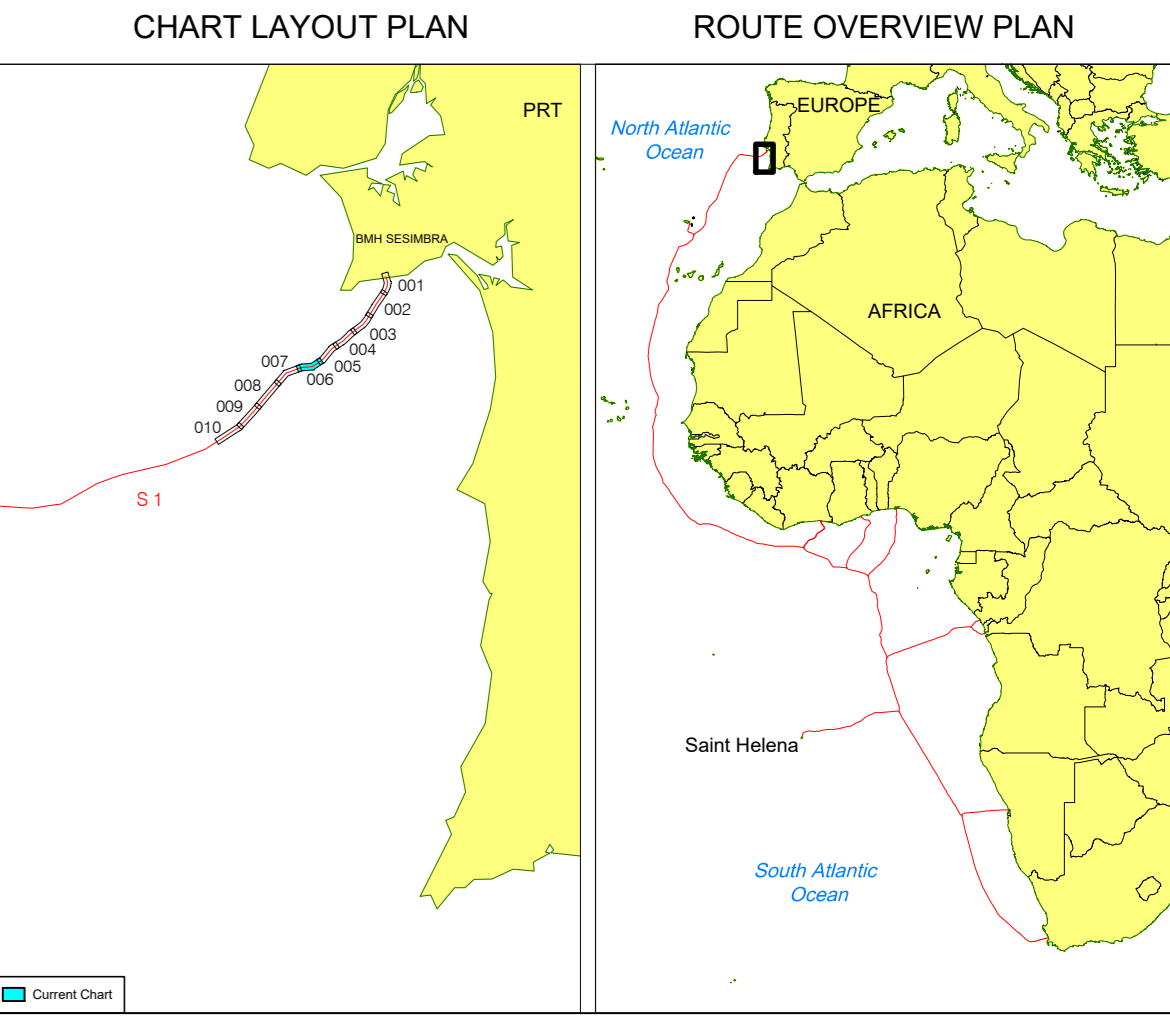
GENERAL NOTES:

Survey Vessel: MV Fugro Gauss
 Navigation Systems: Seapath 3300
 Underwater Pos. Systems: Koningship HEP 351
 Motion Sensor: Seapath 3300 incl. MRU 5+
 Bathymetry: Koningship EM 122 EM 712
 Seabed Feature / SBP: EdgeTech 420V / Knudsen 3200
 Magnetometer: G-862 AR4

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

Bathymetry & Tide:
 Depths in metres, reduced to Lowest Astronomical Tide (LAT).

GEODETIC PARAMETERS:
 Projection: Mercator
 Datum: WGS84
 Semi-Major Axis: 6 378 137 000 m
 Inverse Flattening (1/f): 298 257 223 863
 Longitude of Origin: 20° W
 Standard Parallel: 20° N
 False Easting: 0 m
 False Northing: 1 000 000 m
 Scale Factor: 1



ROUTE OVERVIEW PLAN

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Survey Date: December 2019

Scale: NATURAL SCALE 1 : 10 000 AT 25° N
 0 200 400 600 1000m

Scale 6671 960242 at mid-latitude of chart

Contractor: **ALCATEL SUBMARINE NETWORKS**

Surveyor: **FUGRO** Fugro Germany Marine GmbH

Project Name: **EQUIANO**
 Cable Route Survey

Document Title: **SEGMENT 1**
BMH Sesimbra to BU MAD
 ALIGNMENT CHART NO. 006 OF 010
 (KP 28.007 to KP 34.642)

2.0	06.03.2020	RMJ / JE	KS	BW
1.0	07.02.2020	RMJ / JE	KS	BW
0.0	20.12.2019	AB	OV	RY

Rev: _____ Date: _____ Prepared by: _____ Checked by: _____ Approved by: _____

ROUTE: EQUIANO ST. BAH. SESIMBRA TO BU MAD, PORT. 16-JAN-20-19

REVISION 2

File Name: EQUI_01_AS-006_106

Burial Categories	Installation Risk Assessment (IRA) Categories	Seabed Type Classification for Burial Assessment	Relative Density	Sediment Description
A FULL CLOUGH BURIAL - Full through cable burial expected to target	1 Low risk	I very soft / very loose	< 15	Typically, very loose SAND/SILT, or very soft CLAY/SILT
B REDUCED DAMABLE CLOUGH BURIAL - Target burial cover depth might not be achieved due to seabed conditions. Reduced cable cover depth predicted < 0.5m	2 moderate risk	II soft / loose	20 - 40	Typically, loose SAND/SILT, or soft CLAY/SILT
C UNDESIRABLE CLOUGH BURIAL - Poor burial (in predicted < 0.5m) cover depth	3 significant risk	III firm / medium dense	40 - 75	Typically, medium dense SAND/SILT, or firm SILT/CLAY
D UNDESIRABLE BURIAL - Potential Cable overburial	3 significant risk	IV stiff / dense	75 - 100	Typically, dense SAND/SILT, or stiff SILT/CLAY
E CONTRACT SPECIFIC BURIAL - Cable burial to a specific target cover depth	3 significant risk	V very stiff / very dense	100 - 300	Typically, very dense SAND/SILT, or very stiff CLAY/SILT
F UNDESIRABLE BURIAL - Not appropriate due to seabed conditions or route design criteria	4 high risk	VI Rock	> 300	Weathered bedrock or isolated sediment (granite cemented)