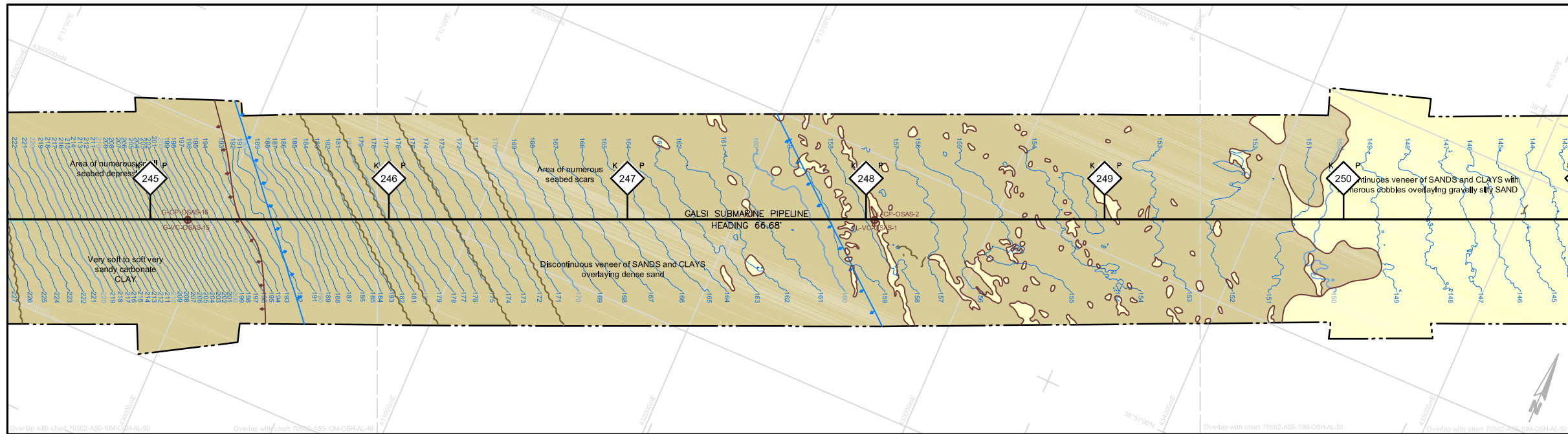
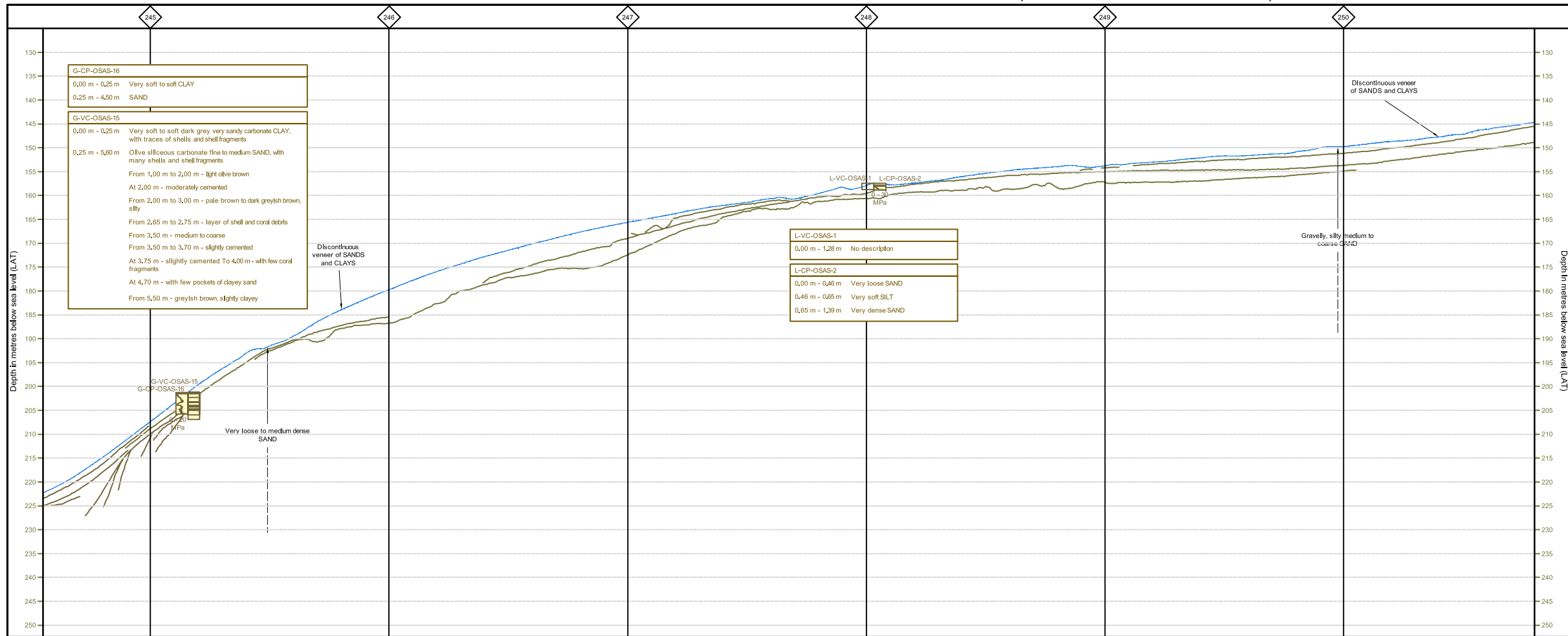


BATHYMETRY AND SEABED FEATURES



LONGITUDINAL PROFILE

HORIZONTAL SCALE 1 : 10,000 VERTICAL SCALE 1 : 500 (x20 VERTICAL EXAGGERATION)



KILOMETRE POST	KP 245.0	KP 246.0	KP 247.0	KP 248.0	KP 249.0	KP 250.0
PIPE SECTION DETAILS	585.8 mm ID x 17.5 mm WT- SAWL DNV 485 IFDU					
EXTERNAL COATINGS	3.8mm Thk 3 LAYER POLYPROPYLENE (PP) @ 900 kg/m ³ + 55 mm Thk @ 3040 Kg/m ³ CONCRETE WEIGHT COATING					
BUCKLE ARRESTOR	BUCKLE ARRESTOR TYPE A - 1 IN EVERY 251 JOINTS					
ANODES	ANODE TYPE: AS1 1 in 21 JOINTS					
LAY TOLERANCE	+/-10m					
INTERVENTION DETAILS	SURFACE LAID					
MINIMUM BEND RADIUS	305m					
ALLOWABLE SPAN LENGTHS	41m INSTALLATION, 33.5m FLOODED, 30m OPERATION					

PIPELINE ENGINEERING

LEGEND:

International boundary / 12 nm limit	In service cable (from data base)
Limit of side scan sonar coverage	Out of service cable
Line of longitudinal profile	Planned cable
G-VC-OSAS-80	Chart overlap
Geotechnical sample / test location	

PIPELINE ROUTE

1 Kilometre Post
Indicating distance from landfall

AS5_REV10M FEED pipeline route

BATHYMETRY / TOPOGRAPHY

Major bathymetric contour at a 1 m interval relative to LAT
Minor bathymetric contour at a 5 m interval relative to LAT
Major topographic contour at a 1 m interval relative to LAT
Minor topographic contour at a 5 m interval relative to LAT

All survey depths are reduced to Lowest Astronomical Tide (LAT).

SEDIMENT TYPES

SILT
Undisturbed seabed
Undulating seabed due to buried mass movement deposits
Surface mass movement deposits
Exposed failure plane
SAND

GRAVEL
CORAL
CARBONATE
MESSINIAN EVAPORITES
ROCK
SEA GRASS (POSIDONIA)

SEABED FEATURES

Sediment boundary (dashed where inferred)
Scarp / significant break of slope
Ridge axis
Localised ridge
Break of slope
Fault outcrop / subcrop
Gully
Trench
Ripple mark orientation
Limit of area of numerous sonar contacts
Limit of area of numerous small seabed depressions
Limit of area of numerous seabed scars
Seabed scar

Wire / cable
As found cable (by SSS)
As found cable (by ROV)
Linear debris with dimensions (length x width x height) in metres
Linear debris from ROV with dimensions (length x width x height) in metres
Sonar contact with dimensions (length x width x height) in metres
Carbonate deposit with dimensions (length x width x height) in metres
Depression less than 12 m in diameter
Depression 12 m or greater in diameter
Coral mound
Rock outcrop with dimensions (length x width x height) in metres
Wreck with dimensions (length x width x height) in metres

LONGITUDINAL PROFILE

Seabed profile
Seabed profile (along proposed pipeline route)
Seabed devoid of undisturbed recently deposited sediment
Major sub-seabed reflector

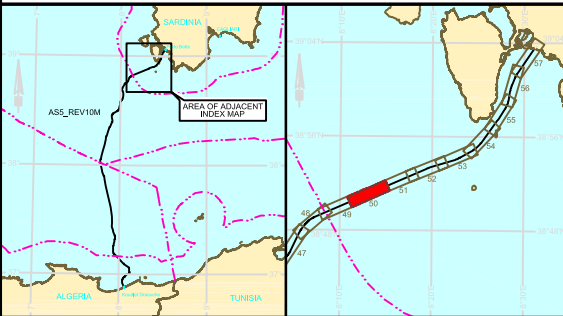
Minor sub-seabed reflector
Fault with direction of throw (dashed where unclear)
Mapped acoustically structureless package

NOTES:

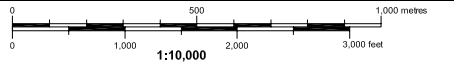
- SEE GALSI DETAILED MARINE SURVEY FINAL REPORT (FUGRO JOB NO. 70502) FOR ALL DMS DATA.
- EPOXY INTERNAL COATING NOMINAL 0.08MM THICK APPLIED TO ALL PIPE JOINTS.
- FOR ANODE AND BUCKLE ARRESTOR DETAILS SEE FEED OFFSHORE FINAL DESIGN REPORT (DOC. NO. 030-G-3-0477).

GEODETTIC PARAMETERS:

GEODETTIC DATUM: ELLIPSOID	WGS 84 (ETRF 1989)	PROJECTION: UNIVERSAL TRANSVERSE MERCATOR
Semi major axis: 6378137.000	Zone 32, 9° East	Latitude of Origin : 0° North
Inverse flattening: 298,2572235630	False Easting : 500,000 m	False Northing : 0 m
	Scale factor at CM : 0.9996	



SCALE:



REV	DATE	DESCRIPTION	BY	CHK	ENG	PM	CLIENT
03	30.01.09	RE-ISSUED FOR APPROVAL	RO	TK	SL	AFB	
02	20.01.09	ISSUED FOR APPROVAL	RO	TK	SL	AFB	
01	25.11.08	ISSUED FOR COMMENT	SJS	SL	SL	AFB	

CLIENT	Galsi	J P KENNY
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PROJECT	GAS PIPELINE ALGERIA TO ITALY VIA SARDINIA
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TITLE	ALGERIA TO SARDINIA FEED ALIGNMENT SHEET 50 OF 57 FROM KP 245 TO 250
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DRG. No.	05-300-P-0-3079	REV	03
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