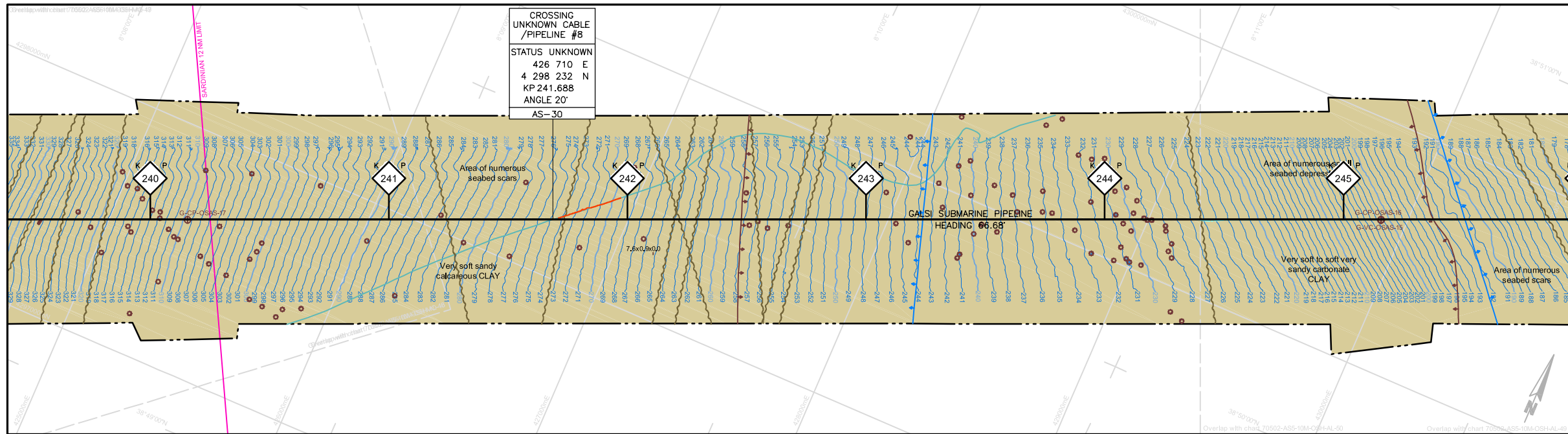
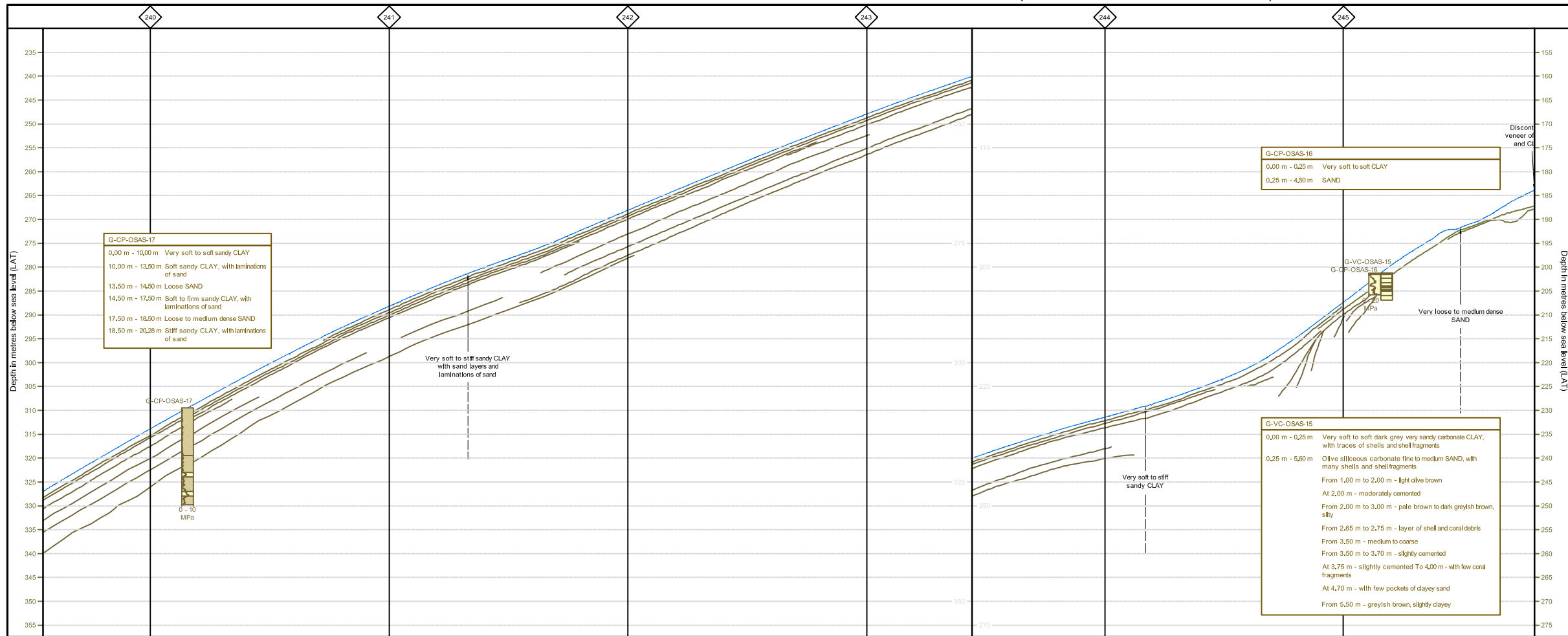


## BATHYMETRY AND SEABED FEATURES



LONGITUDINAL PROFILE

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



KILOMETRE POST	KP 240.0	KP 241.0	241.588	241.688	241.788	KP 242.0	KP 243.0	KP 244.0	KP 245.0
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 <sup>3</sup> + 55 mm Thk @ 3040 Kg/m <sup>3</sup> 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	AS5_REV10M FEED pipeline route
Kilometre Post Indicating distance from landfall	

BATHYMETRY / TOPOGRAPHY	Minor bathymetric contour at a 1 m interval relative to LAT
Major bathymetric contour at a 10 m interval relative to LAT	Major topographic contour at a 5 m interval relative to LAT
Minor topographic contour at a 1 m interval relative to LAT	
All survey depths are reduced to Lowest Astronomical Tide (LAT).	

SEDIMENT TYPES	GRAVEL
UNDISTURBED SEABED	CORAL
UNDULATING SEABED DUE TO BURIED MASS MOVEMENT DEPOSITS	CARBONATE
SURFACE MASS MOVEMENT DEPOSITS	MESSINIAN EVAPORITES
EXPOSED FAILURE PLANE	ROCK
SAND	SEA GRASS (POSIDONIA)

SEABED FEATURES	Wire / cable
Scarp / significant break of slope	As found cable (by SSS)
Localised ridge	As found cable (by ROV)
Break of slope	Linear debris with dimensions (length x width x height) in metres
Fault outcrop / subcrop	Linear debris from ROV with dimensions (length x width x height) in metres
Gully	Sonar contact with dimensions (length x width x height) in metres
Trench	Carbonate deposit with dimensions (length x width x height) in metres
Ripple mark orientation	Depression less than 12 m in diameter
Limit of area of numerous sonar contacts	Depression 12 m or greater in diameter
Limit of area of numerous small seabed depressions	Coral mound
Limit of area of numerous seabed scars	Rock outcrop with dimensions (length x width x height) in metres
Seabed scar	Wreck with dimensions (length x width x height) in metres

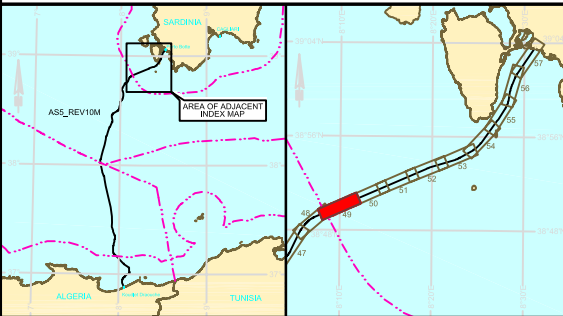
LONGITUDINAL PROFILE	Minor sub-seabed reflector
Seabed profile (along proposed pipeline route)	Fault with direction of throw (dashed where unclear)
Seabed devoid of undisturbed recently deposited sediment	Mapped acoustically structureless package
Major sub-seabed reflector	

## NOTES:

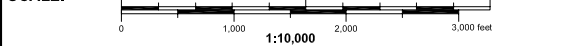
- STATUS OF UNKNOWN CABLE TO BE DETERMINED DURING DETAILED DESIGN.
- SEE GALSI DETAILED MARINE SURVEY FINAL REPORT (FUGRO JOB NO. 70502) FOR ALL DMS DATA.
- EPOXY INTERNAL COATING NOMINAL 0.08MM THICK APPLIED TO ALL PIPE JOINTS.
- FOR ANODE AND BUCKLE ARRESTOR DETAILS SEE FEED OFFSHORE FINAL DESIGN REPORT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

## GEODETTIC PARAMETERS:

GEODETTIC DATUM: WGS 84 (ETRF 1989)	PROJECTION: UNIVERSAL TRANSVERSE MERCATOR
ELLIPSOID: WGS 84	Zone 32, 9° East
Semi-major axis: 6378137.000	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 49 OF 57 FROM KP 240 TO 245
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DRG. No.	05-300-P-0-3078	REV	03
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