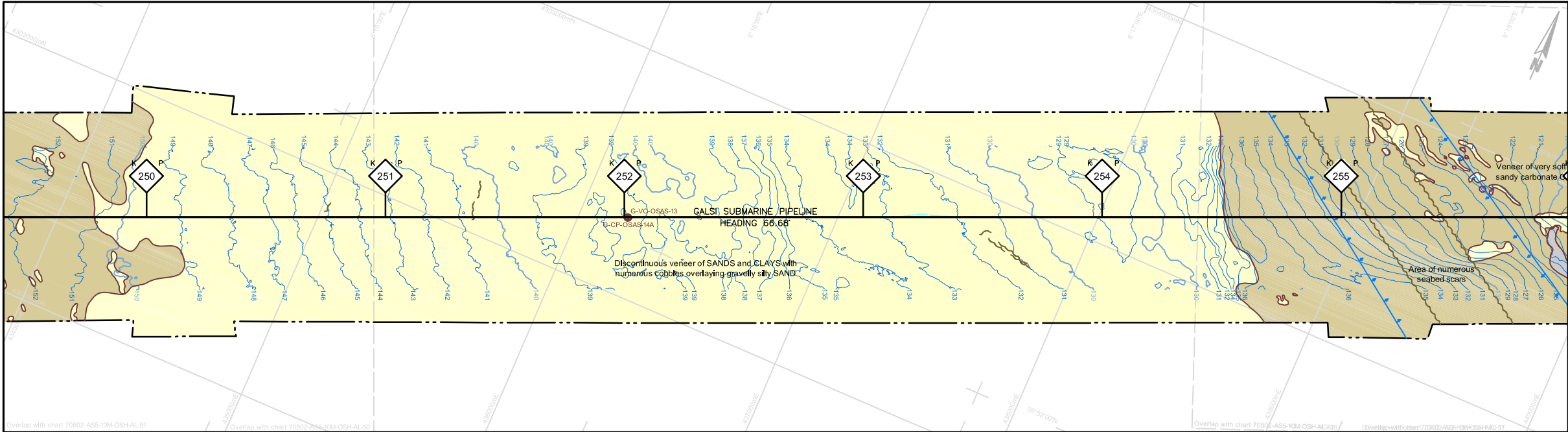


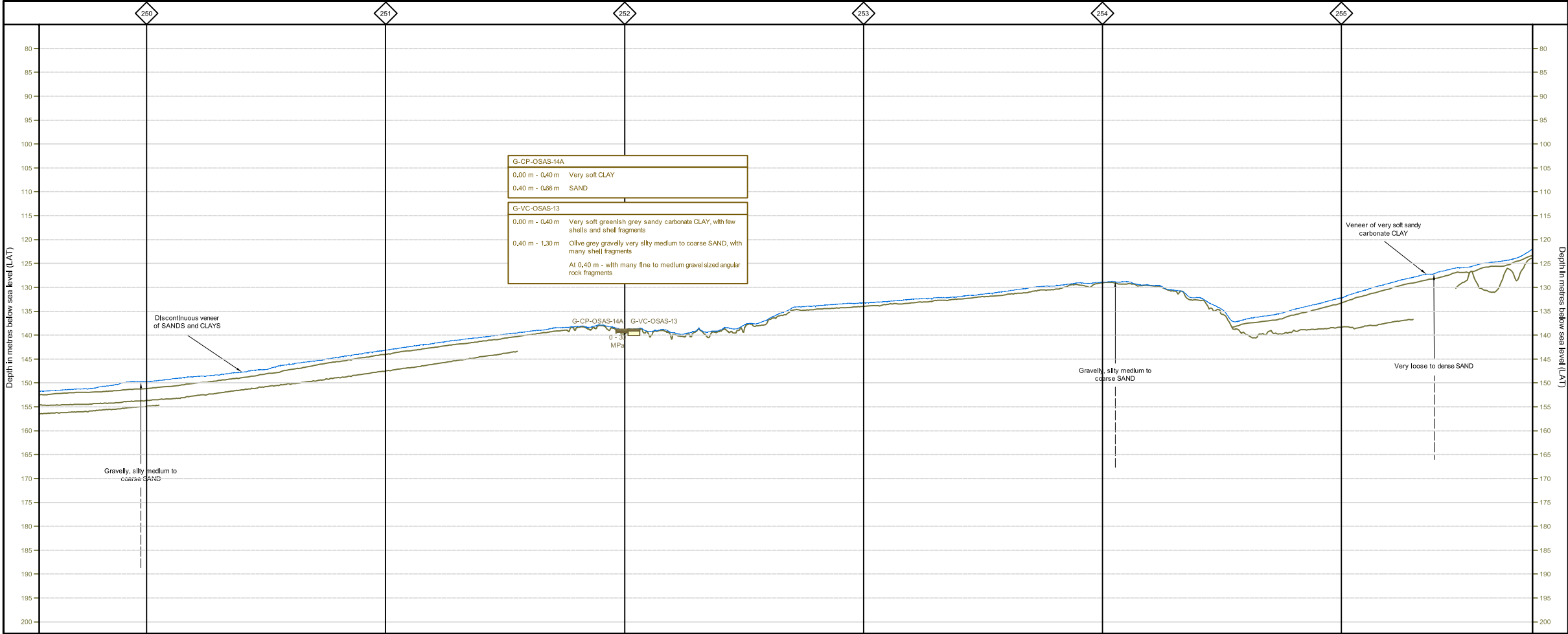
BATHYMETRY AND SEABED FEATURES



LONGITUDINAL PROFILE

HORIZONTAL SCALE 1 : 10,000

VERTICAL SCALE 1 : 500 (x20 VERTICAL EXAGGERATION)



KILOMETRE POST	KP 250.0	KP 251.0	KP 252.0	KP 253.0	KP 254.0	KP 255.0
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/m3 + 75 mm Thk @ 3040 Kg/m3 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

Limit of side scan sonar coverage

Line of longitudinal profile

G-VC-OSAS-80

Geotechnical sample / test location

In service cable (from data base)

Out of service cable

Planned cable

Chart overlap

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 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

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: WGS 84 (ETRF 1989)

FLUROSO: Zone 32, 9° East

Semi major axis: 6378137,000

Inverse flattening: 298,2572235630

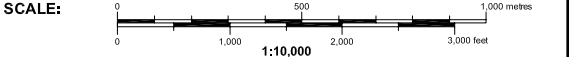
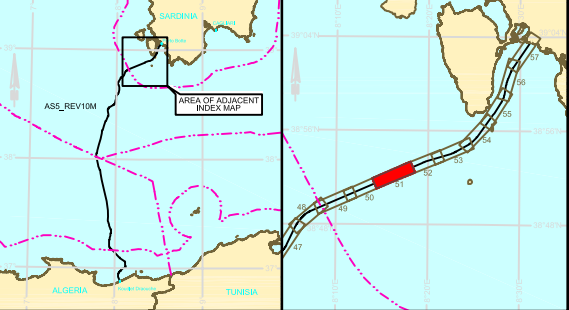
PROJECTION: UNIVERSAL TRANSVERSE MERCATOR

Latitude of Origin: 0° North

False Easting: 500,000 m

False Northing: 0 m

Scale factor at CM: 0.9996



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

PROJECT

GAS PIPELINE
ALGERIA TO ITALY VIA SARDINIA

TITLE

ALGERIA TO SARDINIA
FEED ALIGNMENT SHEET 51 OF 57
FROM KP 250 TO 255

DRG. No.	05-300-P-0-3080	REV	03
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