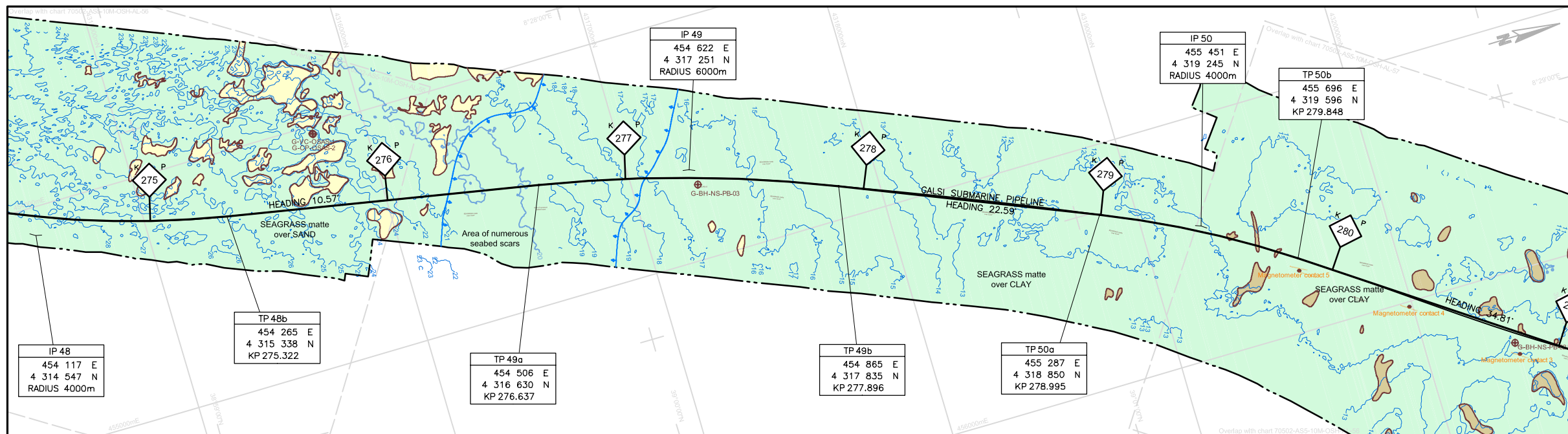


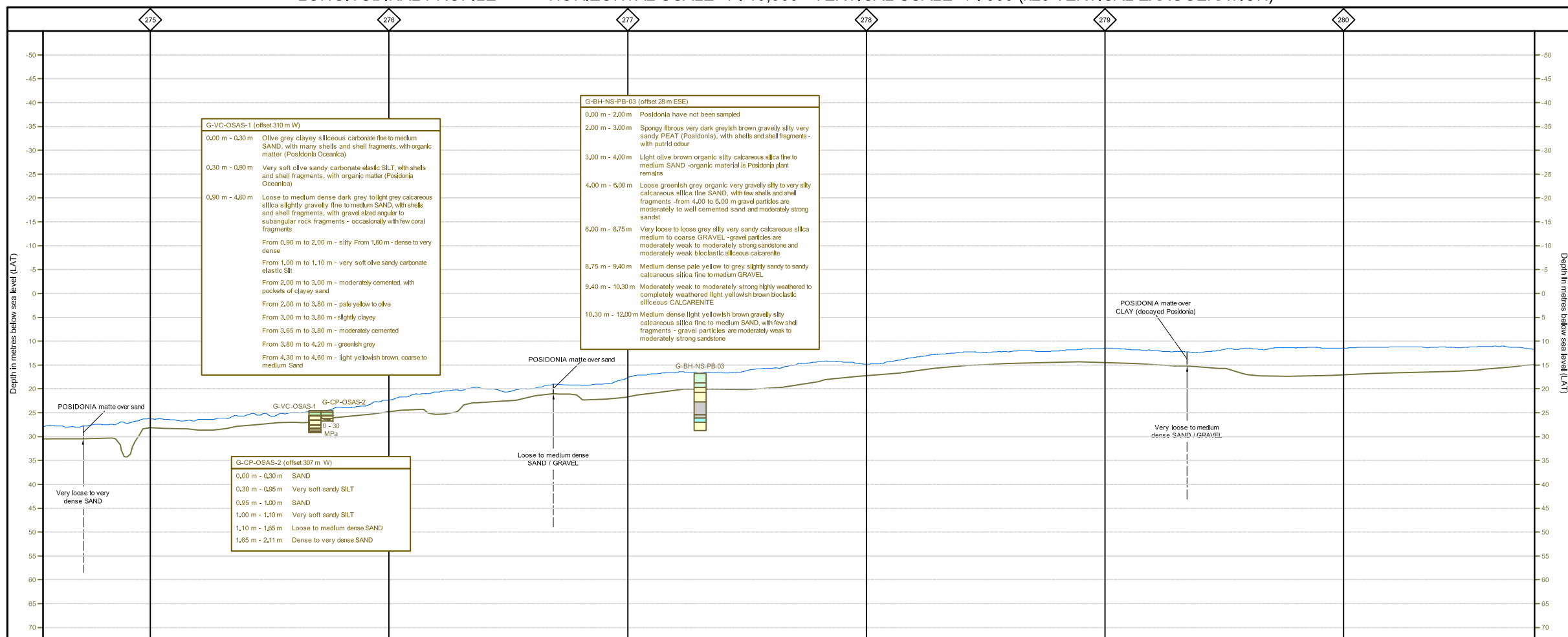
BATHYMETRY AND SEABED FEATURES



LONGITUDINAL PROFILE

HORIZONTAL SCALE 1 : 10,000

VERTICAL SCALE 1 : 500 (x20 VERTICAL EXAGGERATION)



KILOMETRE POST	KP 275.0	275.322	KP 276.0	276.637	KP 277.0	277.896	KP 278.0	278.995	KP 279.0	279.270	279.370	279.848	KP 280.0	
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	NO BUCKLE ARRESTOR													
ANODES	ANODE TYPE: AS1 1 in 21 JOINTS													
LAY TOLERANCE	+/-10m										+/-2m			
INTERVENTION DETAILS	POST LAY TRENCH 2.0m T.O.P. + BACKFILL 1.25m SOIL + 0.75m ROCK TOP										PRE-LAY/POST-LAY TRANSITION		NOTE 2	
MINIMUM BEND RADIUS	518m													
ALLOWABLE SPAN LENGTHS	52m INSTALLATION,43.3m FLOODED, 28m 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	Geotechnical sample / test location
Chart overlap	Chart overlap

PIPELINE ROUTE

Kilometre Post
Indicating distance from landfall

ASS_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

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 (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)

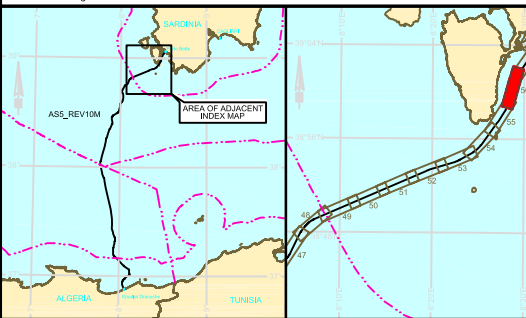
Mapped acoustically structureless package

NOTES:

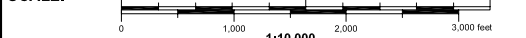
- FOR LANDFALL DREDGING DETAILS SEE DWG. 05-2719-300-P-0-3011.
- PRE-LAY DREDGE & BURIAL 1.25M SOIL + 0.75M ROCK TOP.
- SEE GALSI DETAILED MARINE SURVEY FINAL REPORT (FUGRO JOB NO. 70502) FOR ALL DMS DATA.
- EPOXY INTERNAL COATING NOMINAL 0.08MM THICK APPLIED TO ALL PIPE JOINTS.
- FOR ANODE AND BUCKLE 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: 1.000000



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 56 OF 57 FROM KP 275 TO 280
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DRG. No.	05-300-P-0-3085	REV	03
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