Population of the *SEISCAN* archive into Geo-Seas and its added value

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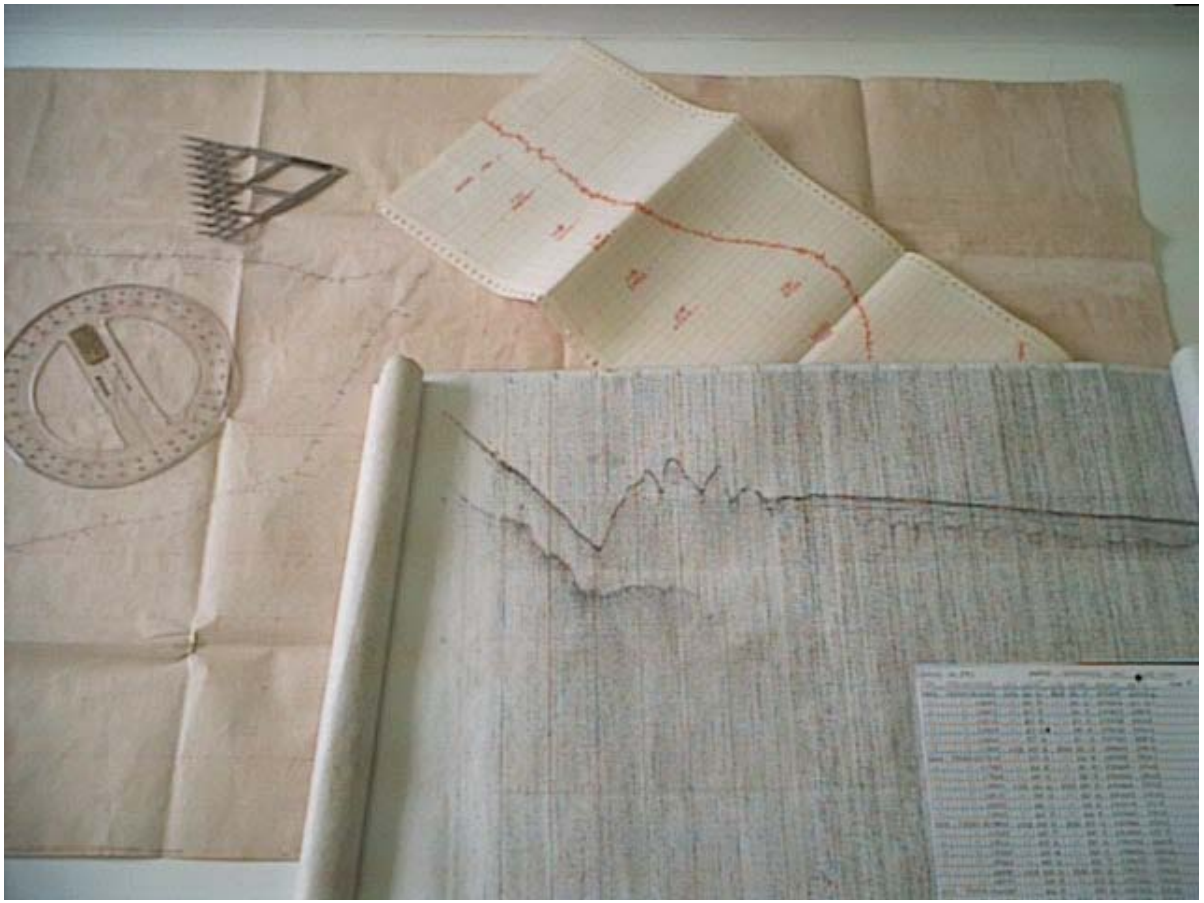
With contributions by NOA, OGS and UB

e-infrastructure

SEVENTH FRAMEWORK PROGRAMME

Geo-Seas

1996 The paper archive legacy



The *SEISCAN/SEISCANEX* projects Key-points

1997-2004

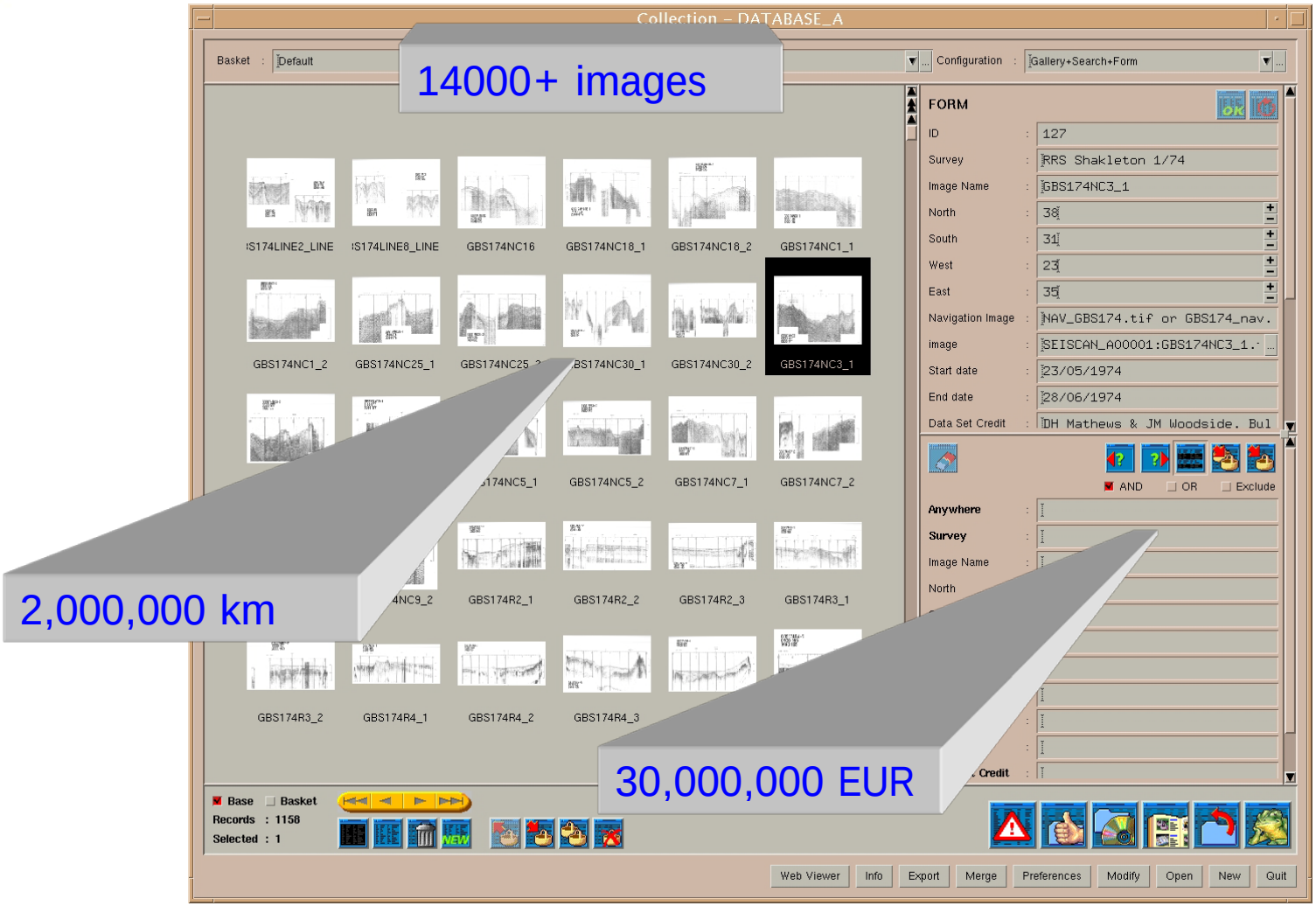
- Enable the scanning of seismic paper records at no cost
- Construct basic ascii metadata (little existed)
- Create web-browser reference to the digital images
- Safeguard data ownership and access
- Develop a cost effective seg-y format conversion module
- Provide training, advice and support

- Re-create the investment in the European seismic acquisition

Geo-Seas

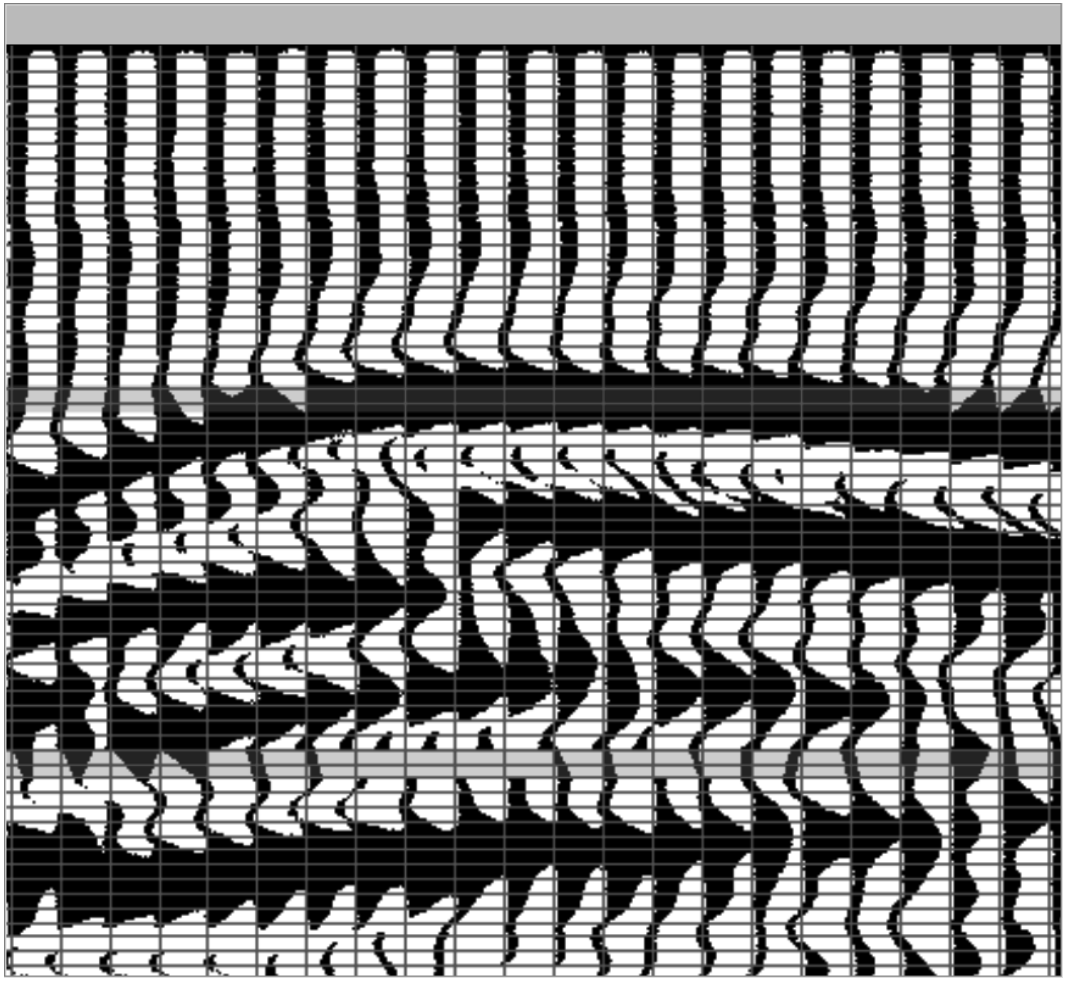
SEISCAN / SEISCANEX legacy 1

- A unique database needing somewhere to go



SEISCAN / SEISCANEX legacy 2

Paper image – SEG-Y conversion



SeisTrans

Good data replication

Hands-on process (time)

Task-resource dependent

Still in demand

Commercial solution costs are too high for academia

Miles et al., 2007 Resurrecting vintage paper seismic records. MGR 28(4):319-329

Geo-Seas

What *SEISCAN/SEISCANEX* did not have:

- xml metadata
- Acquisition geometry and recording parameters
- User-friendly download database
- Remote access to data

SEISCAN/SEISCANEX toward Geo-Seas

- *SEISCAN/SEISCANEX* captured data and showed it existed
- Population of Geo-Seas takes these data to the user community with added information

Population into Geo-Seas

2009-2012

Easy part:

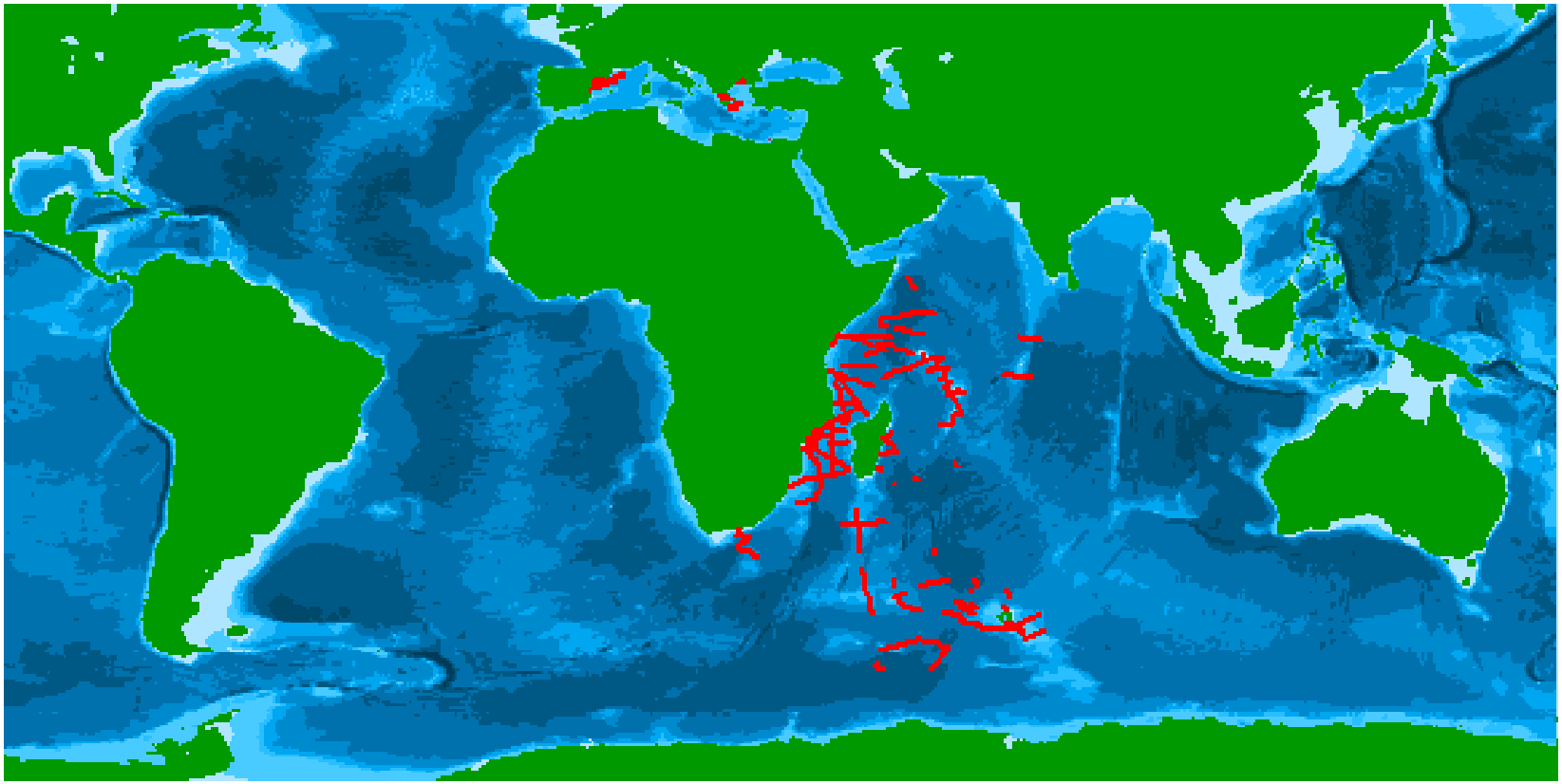
- Populate CDIs from SEISCANEX metadata
  - CNRS, NOA, OGS, UB and IO-BAS hubs established and populated
  - NOCS→BODC seismic upload still outstanding
- Online access to thumbnail images, sometimes to mid-res images
- Access to the data depending on data restriction

Geo-Seas

Population into Geo-Seas

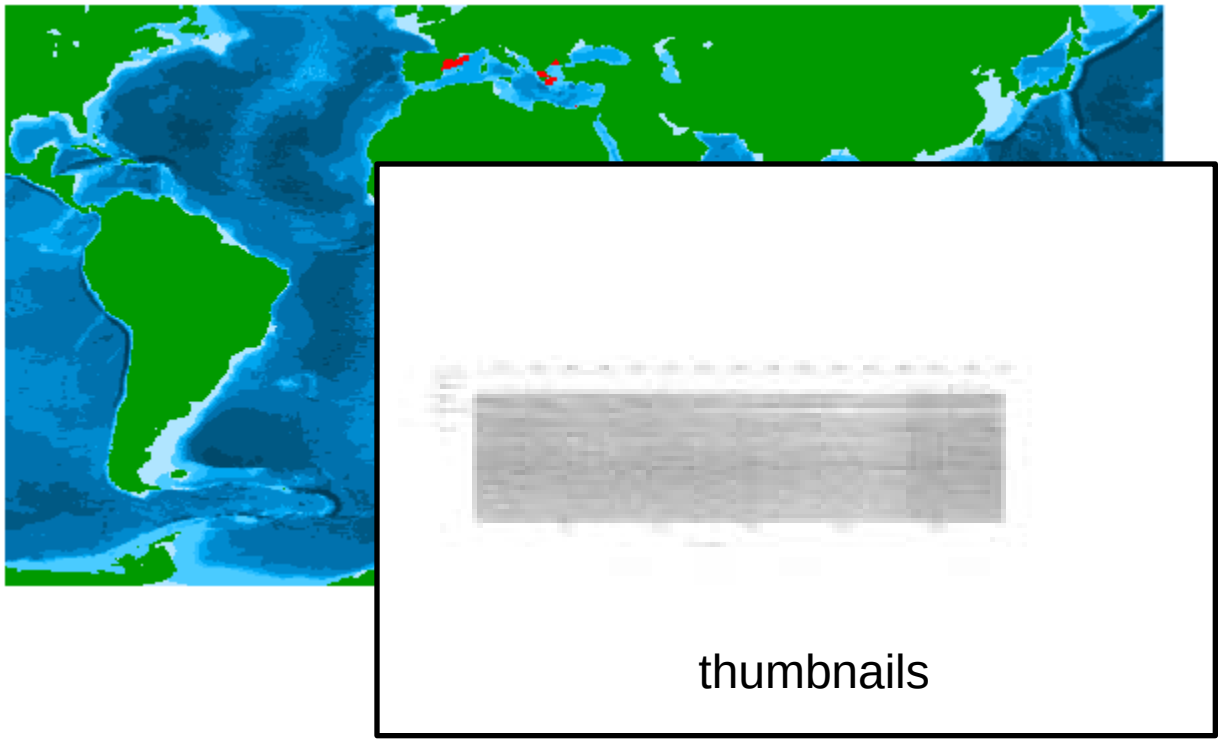
2009-2012

"SEISCANEX" labelled data in Geo-Seas



Population into Geo-Seas

2009-2012

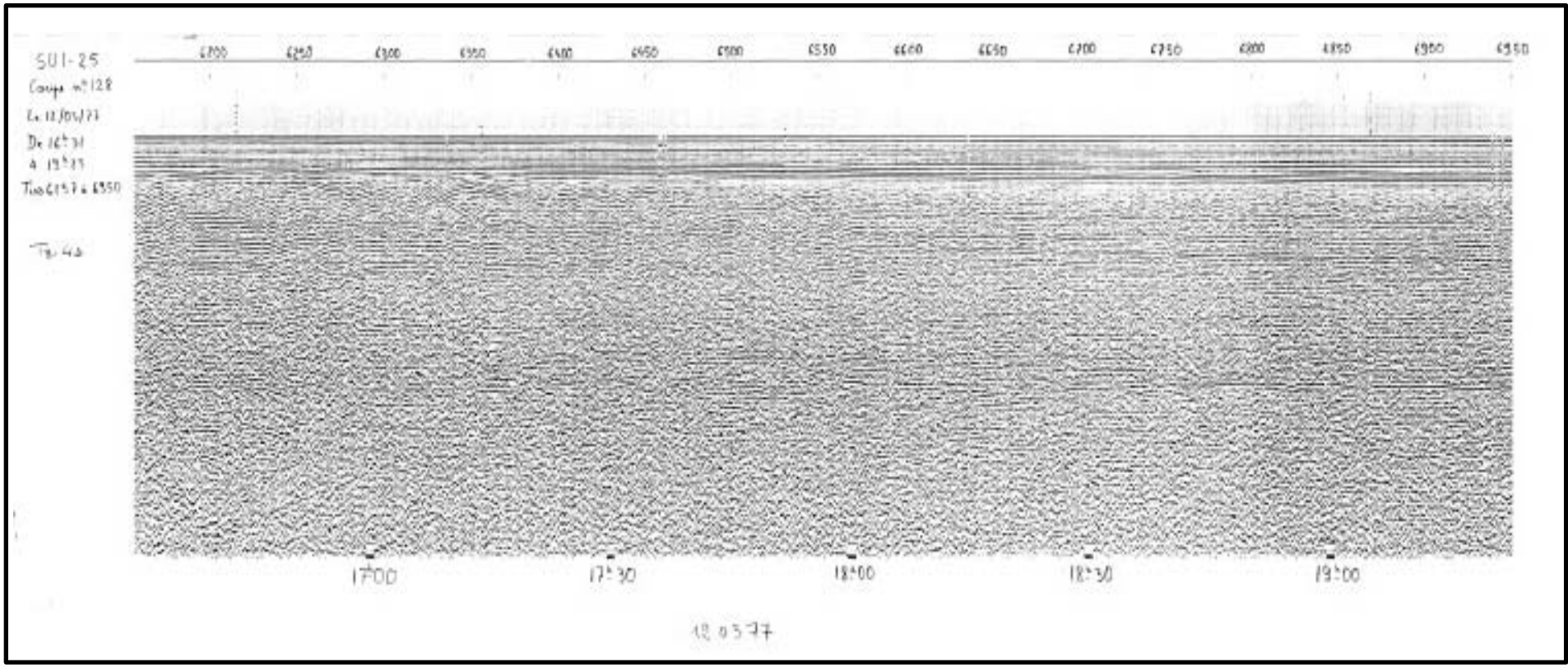


"SEISCANEX" labelled data in Geo-Seas

Population into Geo-Seas

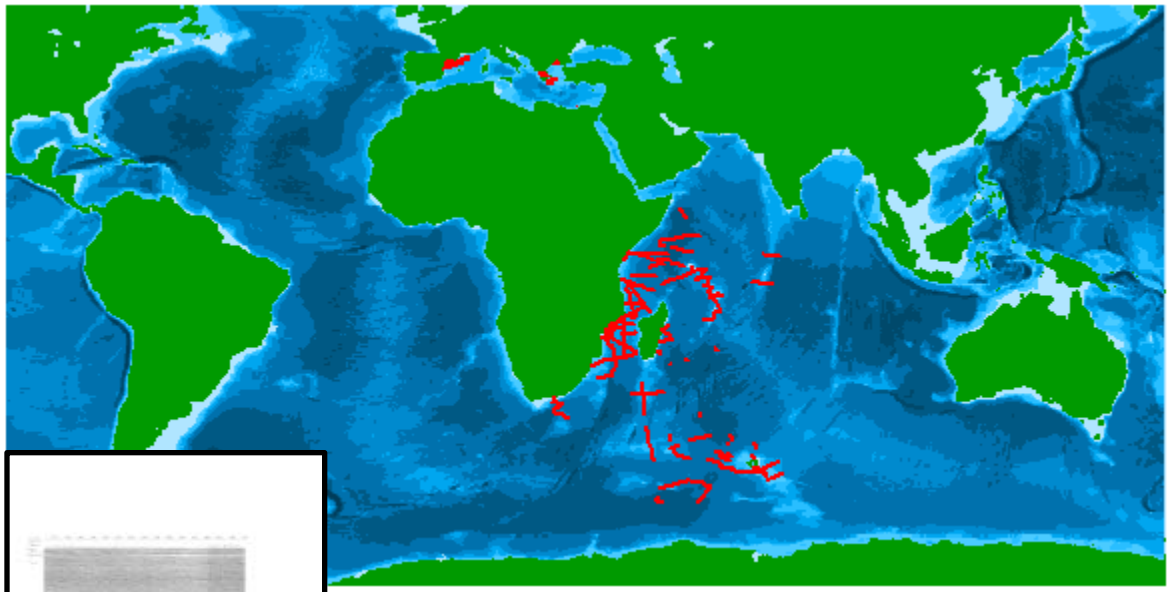
2009-2012

mid-res images

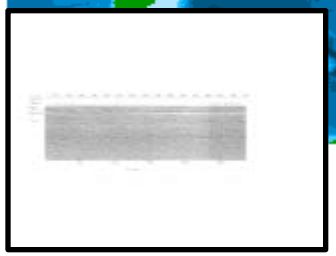


Population into Geo-Seas

2009-2012

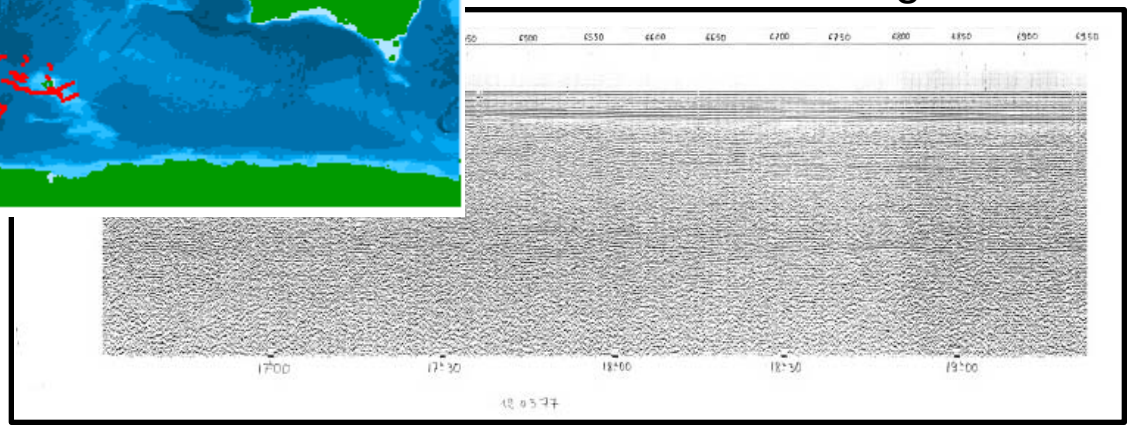


"SEISCANEX" labelled data in Geo-Seas



thumbnails

mid-res images



Extended description

2009-2012

Additional geophysical information described in O&M and SensorML records :

segments of a line (several images forming a profile)

source, acquisition parameters, etc

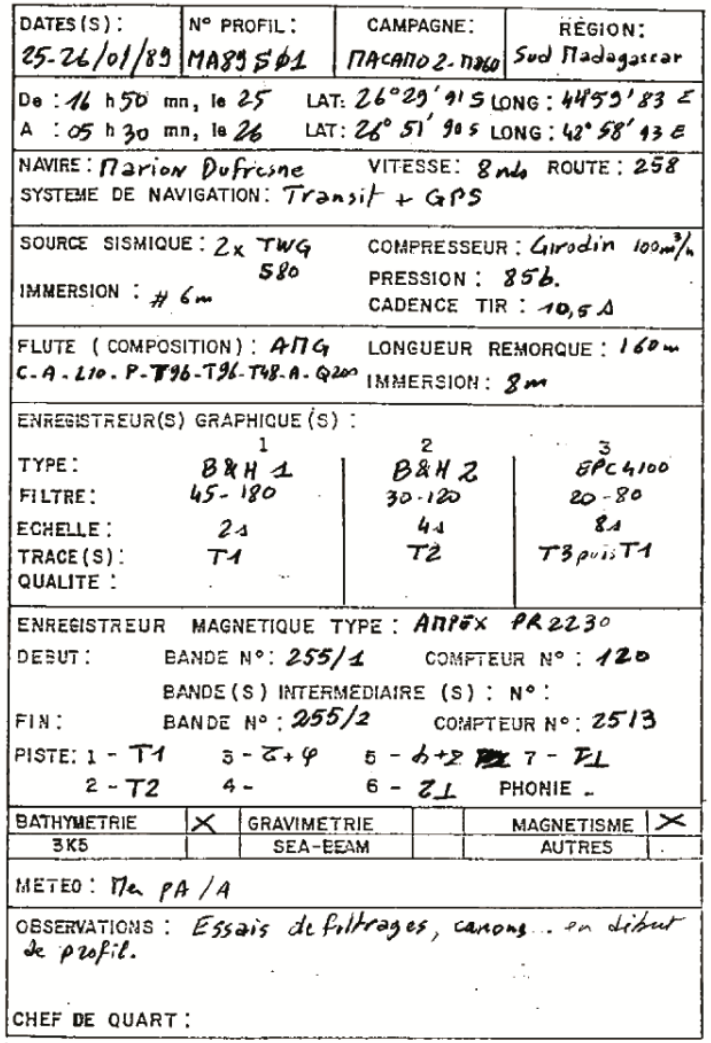
Digital navigation (UKOOA format)

Extended description

2009-2012

Original resources:

reports



DATES (S) :	N° PROFIL :	CAMPAGNE :	RÉGION :
25-26/01/89	MA89S01	MACANO 2 - N960	Sud Madagascar

De : 16 h 50 mn, le 25 LAT : 26°29'91 S LONG : 44°59'83 E
A : 05 h 30 mn, le 26 LAT : 26° 51' 90 S LONG : 42° 58' 93 E

NAVIRE : Marion Dufresne VITESSE : 8 nds ROUTE : 258
SYSTEME DE NAVIGATION : Transit + GPS

SOURCE SISMIQUE : 2x TWG 580 COMPRESSEUR : Girodin 100 m³/h
IMMERSION : # 6 m PRESSION : 85 b.
CADENCE TIR : 10,5 s

FLUTE (COMPOSITION) : ANG LONGUEUR REMORQUE : 160 m
C-A-L10-P-T96-T96-T48-A-Q200 IMMERSION : 8 m

ENREGISTREUR(S) GRAPHIQUE (S) :

	1	2	3
TYPE :	B&H 1	B&H 2	GPC 4100
FILTRE :	45-180	30-120	20-80
ECHELLE :	2 s	4 s	8 s
TRACE (S) :	T1	T2	T3 puis T1
QUALITE :			

ENREGISTREUR MAGNETIQUE TYPE : AMPEX PR 2230
DEBUT : BANDE N° : 255/1 COMPTEUR N° : 120
BANDE (S) INTERMEDIAIRE (S) : N° :
FIN : BANDE N° : 255/2 COMPTEUR N° : 2513
PISTE : 1 - T1 3 - 2+4 5 - 6+8 7 - FL
2 - T2 4 - 6 - 8 PHONIE -

BATHYMETRIE	X	GRAVIMETRIE		MAGNETISME	X
3K5		SEA-BEAM		AUTRES	

METEO : Ma pA / A

OBSERVATIONS : Essais de filtrages, canons ... en début de profil.

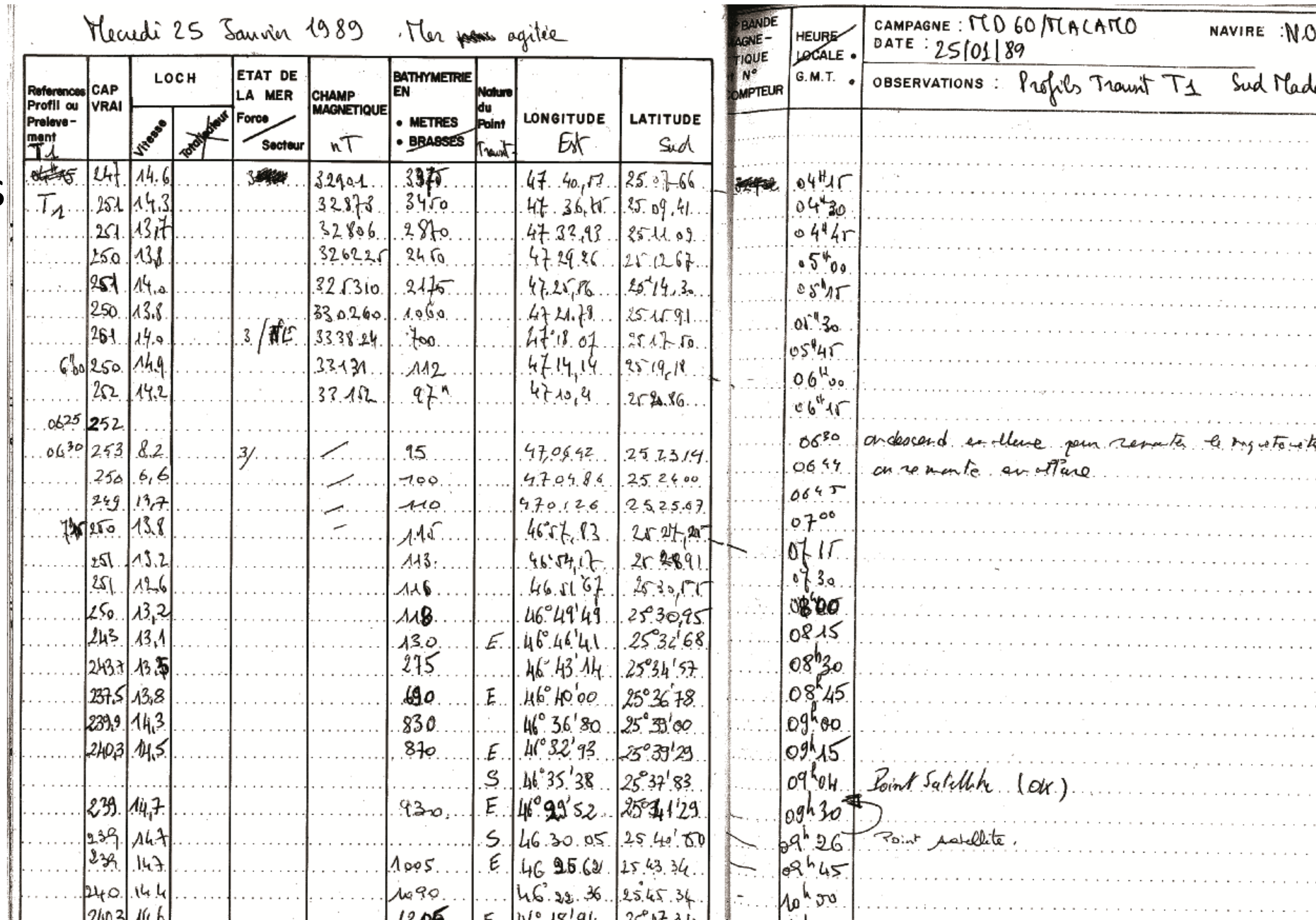
CHEF DE QUART :

Extended description

Original res

reports

Logbooks



Mecredi 25 Janvier 1989 . Mer ~~pas~~ agitée

References Profil ou Prelevement T1	CAP VRAI	LOCH Vitesse	LOCH ~~Totalisateur~~	ETAT DE LA MER Force / Secteur	CHAMP MAGNETIQUE nT	BATHYMETRIE EN • METRES • ~~BRASSES~~	Nature du Point Transit	LONGITUDE Est	LATITUDE Sud
~~04h15~~	247	14.6		3	32901	3375		47 40,53	25 07 66
T1	251	14.3			32878	3450		47 36,45	25 09,41
	251	13,7			32806	2870		47 32,93	25 11 09
	250	13,8			326225	2450		47 29 26	25 12 67
	251	14,0			325310	2175		47 25,86	25 14,30
	250	13,8			330260	1060		47 21,78	25 15 91
	251	14,0		3 / 45	333824	700		47 18 07	25 17 50
6h00	250	14,9			33131	112		47 14,14	25 19,18
	252	14,2			33152	97		47 10,4	25 20.86
0625	252								
0630	253	8.2		3/	/	95		47,06 42	25 23 14
	250	6,6			/	100		47 04 86	25 24 00
	249	13,7			/	110		47 01 26	25 25.67
7h15	250	13,8			/	115		46 57,83	25 27,20
	251	13,2				113		46 54,17	25 28 91
	251	12,6				116		46 51 67	25 30,55
	250	13,2				118		46°49'49	25°30,95
	243	13,1				130	E	46°46'41	25°32'68
	243,7	13,5				275		46°43'14	25°34'57
	237,5	13,8				690	E	46°40'00	25°36'78
	239,9	14,3				830		46°36'80	25°39'00
	240,3	14,5				870	E	46°32'93	25°39'29
							S	46°35'38	25°37'83
	239	14,7				930	E	46°29'52	25°41'29
	239	14,7					S	46 30 05	25 40' 80
	239	14,7				1005	E	46 25 62	25 43 34
	240	14,4				1090		46°22 36	25 45 34
	240,3	14,6				1205	E	46°18'91	25°47 3[illegible]

CAMPAGNE : MD 60/MACAMO NAVIRE : N.O[illegible]

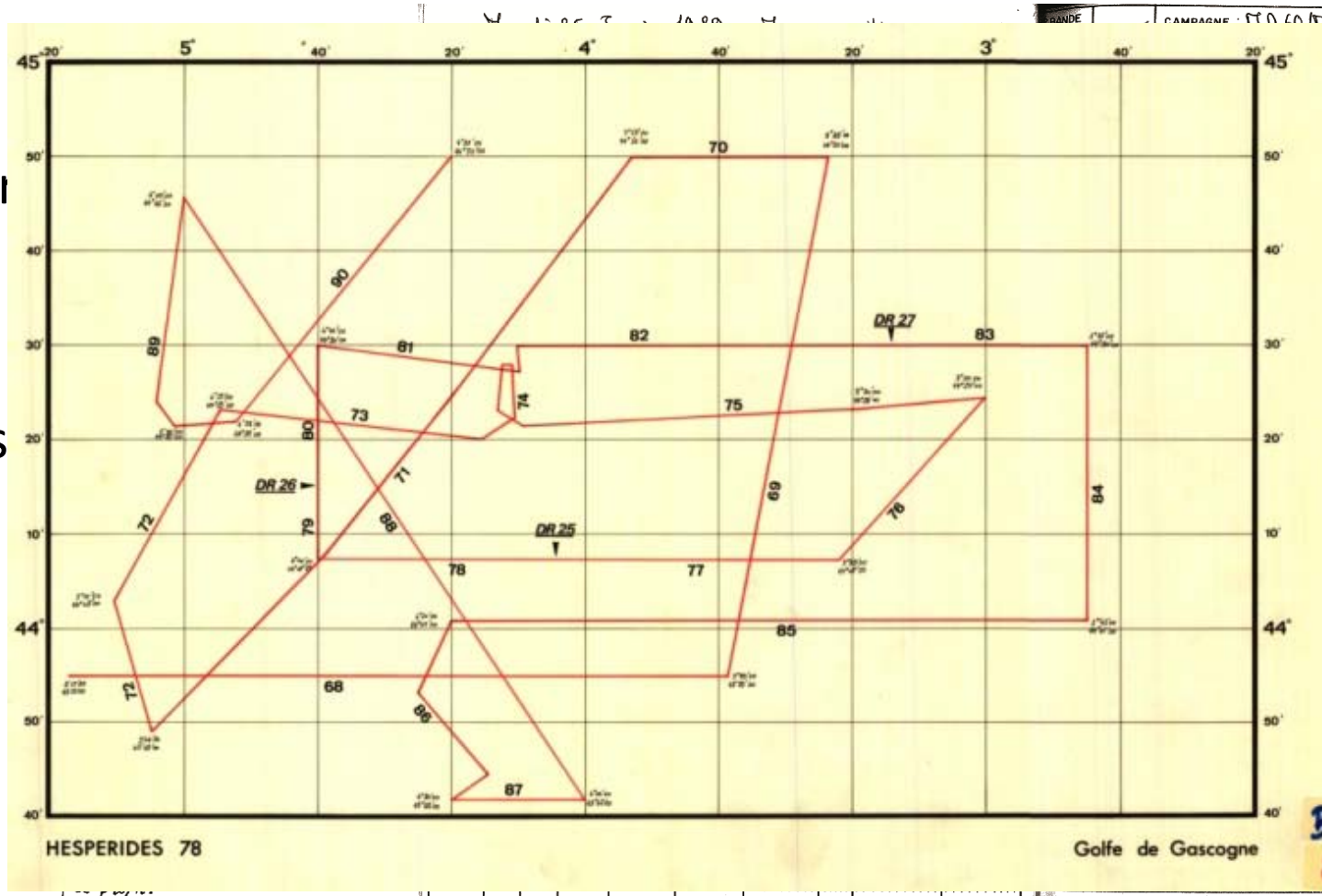
DATE : 25/01/89

OBSERVATIONS : Profils Transit T1 Sud Mad[illegible]

BANDE MAGNETIQUE N° COMPTEUR	HEURE ~~LOCALE~~ G.M.T.	OBSERVATIONS
[illegible]	04h15	
	04h30	
	04h45	
	05h00	
	05h15	
	05h30	
	05h45	
	06h00	
	06h15	
	0630	on descend en allure pour remonter la magnétomètre
	0644	on remonte en allure
	0645	
	0700	
	07 15	
	07 30	
	0800	
	0815	
	08h30	
	08h45	
	09h00	
	09h15	
	09h04	Point Satellite (ok.)
	09h30	
	09h26	Point satellite.
	09h45	
	10h00	

Extended description

Original resou
reports
Logbooks
Location maps



Extended description

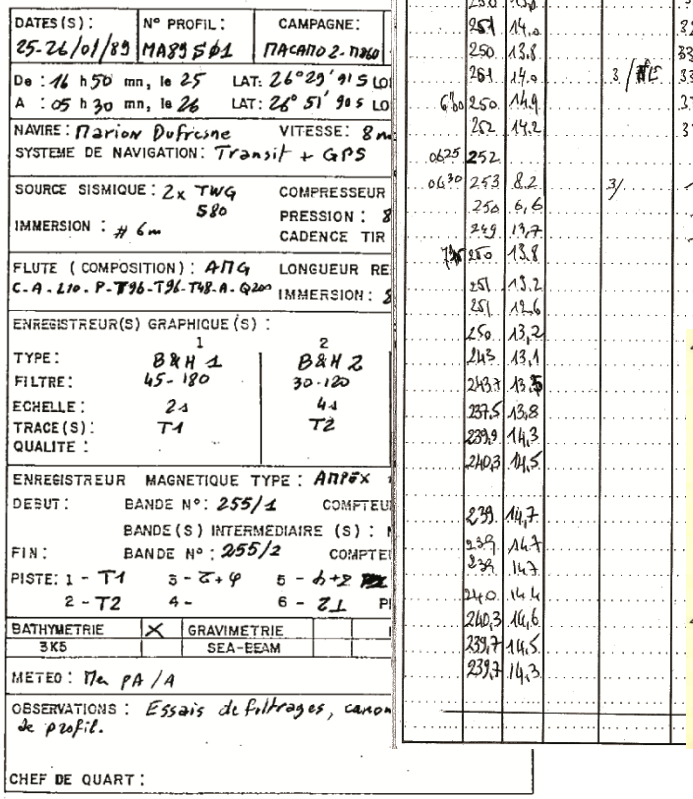
2009-2012

Original resources:

reports

Logbooks

Location maps



DATES (S) : 25-26/01/89 | N° PROFIL : MA89 5 P1 | CAMPAGNE : MACARO 2- N960

De : 16 h 50 mn, le 25 LAT: 26°29'91 S LO
A : 05 h 30 mn, le 26 LAT: 28° 51' 90 S LO

NAVIRE : Marion Dufresne VITESSE: 8 n
SYSTEME DE NAVIGATION : Transit + GPS

SOURCE SISMIQUE : 2x TWG 580 COMPRESSEUR
IMMERSION : # 6m PRESSION : 8
CADENCE TIR

FLUTE (COMPOSITION) : ANG LONGUEUR RE
C-A-L10-P-T96-T96-T48-A-Q200 IMMERSION : 8

ENREGISTREUR(S) GRAPHIQUE (S) :

	1	2
TYPE :	B&H 1	B&H 2
FILTRE :	45-180	30-120
ECHELLE :	2 s	4 s
TRACE (S) :	T1	T2
QUALITE :		

ENREGISTREUR MAGNETIQUE TYPE : ANPEX
DEBUT : BANDE N°: 255/1 COMPTEU
BANDE (S) INTERMEDIAIRE (S) :
FIN : BANDE N° : 255/2 COMPTE
PISTE : 1 - T1 3 - 2+4 5 - 6+2
2 - T2 4 - 6 - 2-1

BATHYMETRIE	X	GRAVIMETRIE
3K5		SEA-BEAM

METEO : Ma PA / A

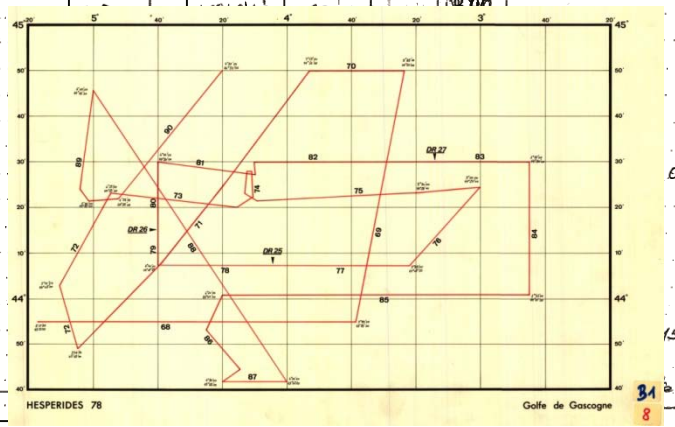
OBSERVATIONS : Essais de filtrages, canon de profil.

CHEF DE QUART :

Mardi 25 Janvier 1989 Mer assez agitée

Références Profil ou Prélèvement	CAP VRAI	LOCH Vitesse	LOCH Tendance	ETAT DE LA MER Force / Secteur	CHAMP MAGNETIQUE nT	BATHYMETRIE EN • METRES • BRASSES	Nature du Point Trait	LONGITUDE Est	LATITUDE Sud
T1	251	14,3			32878	3450		47 36,45	25 09,41
	251	13,7			32806	2870		47 33,93	25 11 09
	250	13,8			32625	2450		47 29,26	25 12,67
	251	14,0			32310	2175		47 25,76	25 14,30
	250	13,8			33260	1060		47 21,79	25 15,91
	251	14,0		3 / N15	33324	700		47 18,07	25 17,50
6h00	250	14,9			33131	112		47 14,14	25 19,18
	252	14,2			33152	97 m		47 10,9	25 20,86
0625	252								
0630	253	8,2		3/	/	95		47,06,92	25 23,14
	250	6,6			/	100		47 04,86	25 24,00
	249	13,7			/	110		47 01,26	25 25,07
7h00	250	13,8			/	115		46 57,83	25 24,20
	251	13,2				113		46 54,17	25 23,91
	251	13,6				116		46 51,67	25 30,15
	250	13,2							
	248	13,1							
	243,7	13,5							
	237,5	13,8							
	239,9	14,3							
	240,3	14,5							
	239	14,7							
	239	14,7							
	239	14,7							
	240	14,4							
	240,3	14,6							
	239,7	14,5							
	239,7	14,3							

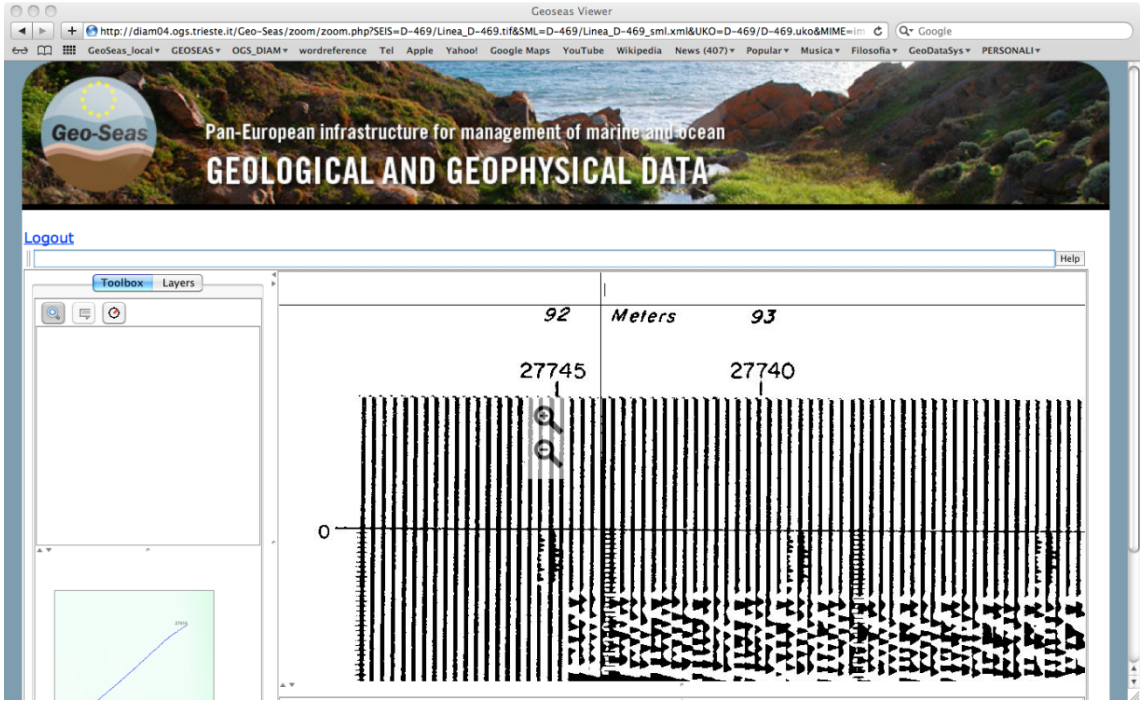
BANDE MAGNETIQUE N° COMPTEUR	HEURE LOCALE / G.M.T.	CAMPAGNE : MD 60/1 DATE : 25/01/89 OBSERVATIONS : Prof
	04h15	
	04h30	
	04h45	
	05h00	
	05h15	
	05h30	
	05h45	
	06h00	
	06h15	
	06h30	descend en ligne
	06h44	on remonte en
	06h57	
	07h00	
	07h15	
	07h30	



HR Viewing

2009-2012

It will be possible to display the images at full scales with the HR seismic viewer



>see next presentation by Paolo Diviacco, OGS

Conclusion & Added Value

2009-2012

Extended and complex work programme to populate Geo-Seas with the *Seiscan/Seiscanex* images

Good progress on CDI population, some delay for O&M, SensorML and navigation due to development of new standards

Some data are now available for download and re-use

IPR are still preserved (integral part of *SEISCAN* projects)

Perspectives

2013-...

- Useful for marine data management, at european and global scale
- Used for UNCLOS EEZ extension (ongoing)
- Academic: general research, education, training
- Commercial value continues
- Continued request for SEG-Y conversion of paper records
- Future project role addressing these european needs ?

Geo-Seas

Thank you