Gulf of Mexico Outer Continental Shelf Analog Seismic Data Conversion and Preservation

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Geology of Coastal Margins Team

Seismic profile from a 1987 R/V Acadiana Survey, GOM
High Resolution Seismic Profiling
1970s – 1990s (Boomer, Sparker, Air Gun)
Analog data holdings
(Federal agencies, state geological surveys, academic institutions)
Analog data holdings

Paper rolls, vellums, fanfolds.
Cruise logs (maybe),
Navigation files (maybe)

Trackline maps
Recovering navigation from trackline maps

1982 Lacoss project survey, offshore Cameron La, GOM
Recovering navigation from trackline maps

New information included
In archive for reproducibility

Lacoss 83-3, c 18

Start of Line
No signal
Boat wake

1800 Time stamp

1800z

1800z

Heading offshore

Vessel turning

End of Line
Recovering navigation from trackline maps
USGS Digital Archives/Metadata

CMGP Field Activity Information Search

Search data by type

Digitizing data & GIS development
Creating digital images of analog data (distortion correction)

Profiles saved as 300 dpi TIF images
Generate new metadata for analog datasets

<table>
<thead>
<tr>
<th>ID</th>
<th>Acadiana 87-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chief Scientist</td>
<td>John R. Suter</td>
</tr>
<tr>
<td>Organizations</td>
<td>LGS, DU, USGS, LUMCON</td>
</tr>
<tr>
<td>Vessel</td>
<td>R/V Acadiana</td>
</tr>
<tr>
<td>Location</td>
<td>Chandeleur Islands, Mississippi Barriers, onshore and offshore</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Trackline Name</th>
<th>1(b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Segment</td>
<td>2 of 3</td>
</tr>
<tr>
<td>Filename</td>
<td>A87-2_1b</td>
</tr>
</tbody>
</table>

**Equipment**

- ORE Geopulse: Benthos 10 element Hydrophone, EPC 3200 Recorder, ORE 5210 Receiver, ORE 5420A Power Supply, ORE 3.5 kHz Subbottom Profiler with ORE Transmitter

**Navigation Equipment**

- Northstar 6000 LORAN with Texas Instruments Silent 700 EPC Delay box

**Start Date / Day / Time**

- 16 June 1987 / 167 / 04-05Z

**End Date / Day / Time**

- 16 June 1987 / 167 / 07-45Z

**Filter (high/low)**

- 3000 / 500 Hz

**Scale / Fire / Sweep (Subbottom Profiler)**

- 1/5 / .25 sec / .25 sec

**Contact Voice Telephone**

- (727) 502-8000

**Contact Electronic Mail Address**

- sbosse@usgs.gov

**Metadata Standard Name**

- Content Standard for Digital Geospatial Metadata

**Metadata Standard Version**

- FGDC-STD-001-1998

**FGDC-compliant Metadata add to archive**

**Identification Information:**

**Citation:**

- Originator: Stephen T. Bosse
- Originator: James G. Flocks
- Originator: Arnell S. Forde

**Publication Date:** 20170622

**Title:** Archive of digitized analog boomer seismic reflection data collected during U.S. Geological Survey cruise Acadiana 87-2 in the northern Gulf of Mexico, June 1987

**Geospatial Data Presentation Form:** Multimedia presentation

**Series Information:**

- 
- 

**Spatial Domain:**

**Bounding Coordinates:**

- West Bounding Coordinate: -89.324
- East Bounding Coordinate: -88.116
- North Bounding Coordinate: 30.2467
- South Bounding Coordinate: 29.1042

**Keywords:**

- 
- 

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**Contact Electronic Mail Address:** sbosse@usgs.gov

**Metadata Standard Name:** Content Standard for Digital Geospatial Metadata

**Metadata Standard Version:** FGDC-STD-001-1998
Converting image profiles to Seg-y format
(industry standard format for seismic data)
Converting image profiles to Seg-y format
Data integration

1990 Kit Jones Survey, GOM

1993 Carancahua Survey, GOM
Converting image profiles to Seg-y format
Data integration

Geologic data recovered, preserved and re-introduced
Recovered analog seismic data

1981 Gyre survey, GOM
Where to:

- Currently assessing status of GOM analog seismic data stored at the USGS Woods Hole field office:

<table>
<thead>
<tr>
<th>FAN (AA)</th>
<th>Alternate ID</th>
<th>PI(s)</th>
<th>Location</th>
<th>Start Date</th>
<th>End Date</th>
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<tbody>
<tr>
<td>1975-013-FA</td>
<td>Party 77</td>
<td>Louis E. Garrison</td>
<td>upper continental slope, Texas to Florida, Gulf of Mexico, Unit</td>
<td>7/7/85</td>
<td>12/20/75</td>
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<tr>
<td>1980-014-FA</td>
<td>80-G-8A</td>
<td>Charles W. Holmes</td>
<td>West Florida Shelf, Florida, Alabama, Gulf of Mexico, United St</td>
<td>6/1/80</td>
<td>7/5/80</td>
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<td>1989-008-FA</td>
<td>DEB-89-1; DEBB 89-1</td>
<td>Harley J. Knebel</td>
<td>Mobile Bay, Mississippi Sound, Alabama, Mississippi, United States</td>
<td>5/2/89</td>
<td>5/4/89</td>
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<tr>
<td>1985-034-FA</td>
<td>85 Leg 3A; FRNL 85-3A</td>
<td>David Twichell</td>
<td>eastern Gulf of Mexico, United States, North America, North At</td>
<td>10/2/85</td>
<td>10/22/85</td>
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<tr>
<td>1982-039-FA</td>
<td>LACOSS II 12/82</td>
<td>John West</td>
<td>Louisiana Shelf, Isles Dernieres, Grand Isle, Louisiana, United States</td>
<td>12/5/82</td>
<td>12/17/82</td>
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<tr>
<td>1982-042-FA</td>
<td>LACOSS I</td>
<td>John West</td>
<td>western Louisiana Continental Shelf, Louisiana, United States</td>
<td>8/27/82</td>
<td>9/18/82</td>
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<td>1983-010-FA</td>
<td>702-64 (83-1)</td>
<td>Ronald C. Cire, Lawrence Poppe</td>
<td>West Florida Escarpment and slope, Mississippi Canyon Reef</td>
<td>10/18/83</td>
<td>11/5/83</td>
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<tr>
<td>2000-005-FA</td>
<td>GB 0-00-0M</td>
<td>Kathryn Scanlon Catanach</td>
<td>Northeastern Gulf of Mexico, United States, North America, Nc</td>
<td>2/15/00</td>
<td>3/2/00</td>
</tr>
</tbody>
</table>

If anyone has/knows of existing GOM OCS analog seismic datasets in need of recovery let me know

- Continue Archive of data in St. Petersburg field office

- In collaboration with BOEM, USM – Division of Marine Science, & UT - School of Geosciences to Develop Seismic GOM OCS geologic database

- Integrate other geologic datasets (e.g. core logs) into restoration process