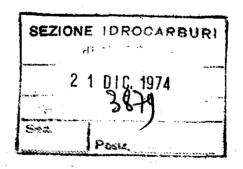
RISERVATO

CANADIAN SUPERIOR OIL LTD.

Tyrrhenian Sea Project

Zone E, Offshore West Coast, Italy

Block d 22-E-R-CC



October, 1974

G. A. Mouritsen

TABLE OF CONTENTS

- I Operations
- II Recording
- III Navigation Systems
- IV Processing
- V Interpretation

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Maps Submitted

- 1. Time Structure Unconformity (Base of Upper Miocene)
- 2. Water Depths (Feet)

I Operations

Dates of Survey

Contractor (acquisition)

Boat

Quality Supervision

Number of Miles

- April 11th & 12th, 1974

- Seismograph Services Ltd.

- M/V K. R. Toender

- J. E. Law of Exploration Consultants Ltd.

- 20.6

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II Recording

Seismograph Services Ltd.

Instruments

Filters

Sample Rate

Tape

Geophones

Cable

Pop Interval

Energy Source

Shot Point Interval

Type Shooting

Gun Depth

T.I. DFS III, 62 channel, Binary Gain

Hi Cut 62 hz. alias Lo Cut 8 hz., 18 db/Oct.

4 mil

9 track

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Multidyne, 48 groups 50 meters in length at 50 meter intervals

Seismic Engineering 2400 meters at 15 meter depth.

50 meters

8 unmodified 12" diam. Esso Prod. and Research sleeve exploders arranged in 4 pairs with a 1.7 sec. fill.

500 meters

2400%

25 feet

III Navigation Systems and Ancillaries

- 1. 2 Decca DL21 Loran "C" Receivers
- 2. Magnavox 200 Dual Channel Integrated Sat/Nav System
- 3. Magnavox Satellite Receiver Dual Channel 400 mhz and 150 mhz.
- 4. Ametek Straza 2020 Sonar Doppler
- 5. Sperry 227 Gyrocompass
- 6. Houston Instruments Omnigraphic Track Plotter
- A5R 33 Teletype
- 8. SSL Data Logger
- 9. Krupp Atlas/Deso Fathometer

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Loran "C" range - 1200 nautical miles over sea - 900 nautical miles over land.

Boat - M/V K.R.Toender

Type: - Converted Norwegian trawler built 1962

Dimensions - Gross tonnage - 984

Length - 200 feet

Beam - 30 feet

Draught - 16.6 feet

Cruise Speed - 13' knots

Bridge Equipment- 1 Kevin Hughes 1214 Radar, 1 Kevin Hughes 19 Radar, 1 Decca 101 Radar, 1 Anschultz Automatic Pilot,

1 Anschultz Gyrocompass, 2 Simrad Echo Sounder,

1 Radiphone VHF Radio and 1 Disa Ship to Shore Radio.

IV Data Processing: by Eldred Won

Data Processing was done entirely by Seiscan Delta. Testing and selection of processing parameters carried out by Seiscan Delta and was supervised by Canadian Superior Oil Ltd. Different types of deconvolution operators were tested on the data. The best results were obtained with predictive deconvolution with a predictive time of 36 milliseconds and an operator length of 400 MS and varied to 300 MS for the shallower water. The data was filtered before decon with a 6-56 hz. digital filter and filtered again with 6-56 digital filter after decon to minimize noise brought up by the decon operator.

Velocity spectrum locations were selected by Canadian Superior from the plots of the near traces and run and interpreted by Seiscan Delta. Velocity locations were selected at approximately one (1) every three (3) miles and also at line intersections.

Final displays were filtered with a time and space variant digital filter. In general a 12-48 hz. filter was used on the shallow part of section, 6-40 hz. filter was used on the middle part of section, and 0-24 hz. filter was used on the deeper part of section. Compare processing sequence as follows:--

- 1. Data was edited.
- 2. Gain recovery and spherical divergence corrections applied.
- 3. CDP gathers.
- 4. Deconvolution performed on data.
- 5. Near traces plotted 100% section.
- 6. Velocity locations selected, spectrum run and interpreted.
- 7. NMO applied.
- 8. Muting and verivels run to monitor the efficiency of velocity functions.
- 9. Digital filtering.
- 10. Trace equilization.
- 11. Display on film.

V Interpretation

The Base of Upper Miocene Unconformity is a monocline with a southwest regional dip. Minor normal faults are present and are associated with minor anticlinal and synclinal nosing. The Unconformity is relatively shallow near shore but plunges rapidly seaward.

No useable data exists below the Base of Upper Miocene Unconformity.

Respectfully submitted

G. A. Mouritsen

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