

(200)
R290
No. 79-371

m(082)24
B454c
c.1

MARINE SEISMIC SONOBUOY DATA
FROM THE BERING SEA REGION

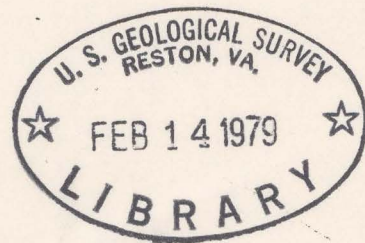
Jonathan R. Childs and Alan K. Cooper

U.S. Geological Survey,
Open File Report,
79-371

January 1979

U.S. Geological Survey
OPEN FILE REPORT
This report is preliminary and has
not been edited or reviewed for
conformity with Geological Survey
standards.

Any use of trade names and trade marks in
this publication is for descriptive purposes
only and does not constitute endorsement by
the U.S. Geological Survey.



description of the equipment employed are contained in Childs and Cooper,
(1978). Some of the preliminary results from these sonobuoys are reported
in Childs, et al., (1977), Cooper, et al., (1978), and Marlow, et al.,
(1977). Complete refraction and reflection results are in preparation.

All data are available for inspection at U.S. Geological Survey, Rm
B-164, Deer Creek Facility, 345 Middlefield Rd., Menlo Park, California,
94025. Copies can be obtained from the National Geophysical and
Solar-Terrestrial Data Center, NOAA, Boulder, Colorado, 80302.

MARINE SEISMIC SONOBUOY DATA
FROM THE BERING SEA REGION

Throughout the field seasons of 1975 to 1978, the Geological Survey
carried out an extensive program of seismic sonobuoy research aboard the
R/V S.P. LEE over the entire Bering Sea region. 75 successful sonobuoy
refraction and wide angle reflection stations were recorded over the shelf
areas of Navarin Basin, St. George Basin and Umnak Plateau, and the deep
ocean areas of Bowers Basin and the Aleutian Basin. Of these, 18 were in
shallow water depths (less than 200 meters), 21 were in intermediate depths
(200 to 3000 meters) and 36 were in deep water (greater than 3000 meters).
The shortest of the sonobuoy lines is 3 nautical miles (5.6 km) while the
longest is almost 42 n.m. (78 km). The average distance is 17 n.m. (31
km). These unreversed sonobuoy lines were all recorded with a tuned air
gun array and were all shot along single channel, and often multichannel,
seismic lines.

The data is contained on one roll of 35mm microfilm, and included
are:

1. a trackline map indicating station locations;
2. a station summary log;
3. log records for each sonobuoy station;
4. analog sonobuoy records, recorded on board ship with
a Raytheon UGR recorder; 6, 8 or 10 seconds record
length and 40 shots per inch.

All sonobuoy data were also recorded on board ship on an 8 track, 1/4
inch analog tape recorder at 3 3/4 ips. A complete explanation of the
procedure followed in recording these sonobuoy stations and a detailed

REFERENCES

- Childs, J.R., A.K. Cooper, M.S. Marlow and D.W. Scholl, 1977,
Sonobuoy Refraction Data from the Bering Sea Basin,
GSA 1977 Annual Meeting, Abstracts with Programs, vol. 9
no. 7, p. 927-928
- Childs, J.R. and A.K. Cooper, 1978, Collection, Reduction,
and Interpretation of Marine Seismic Sonobuoy Data,
USGS Open File Report No. 78-442, April 1978
- Cooper, A.K., D.W. Scholl, M.S. Marlow, J.R. Childs,
G.D. Redden and K.A. Kvenvolden, 1978, The Aleutian
Basin, Bering Sea - A Frontier Area for Hydrocarbon
Exploration, Proceedings, Offshore Technology Conference,
OTC Paper 3089, p. 353-362, 1978
- Marlow, M.S., D.W. Scholl and A.K. Cooper, 1977, St. George Basin,
Bering Sea Shelf: A Collapsed Mesozoic Margin, in Island
Arcs, Deep Sea Trenches and Back-Arc Basins, edited by M. Talwani
and W.C. Pittman, American Geophysical Union

M(082)24
B454c
sheet 2
M(200)
R290
79-371
542
c



79-371/m