DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

MISCELLANEOUS INVESTIGATIONS SERIES
MARINE GEOLOGY ATLAS
BEAUFORT SEA
MAP I-1182-C (SHEET 3 OF 3)

NORMAL (GRAVITY) FAULTS AND MONOCLINES OF BARROW SECTOR SEAWARD FROM HINGE LINE AT NORTH MARGIN OF ARCTIC PLATFORM

IDENTIFYING NUMBER OF STRUCTURAL FEATURE ON MAPS, FIGURES, AND IN TEXT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
TRACKLINE NUMBER OF HIGH-RESOLUTION (UNIBOOM) SEISMIC PROFILE ON WHICH STRUCTURAL FEATURE WAS OBSERVED (GRANTZ AND GREENBERG, 1981)	783	782	782	775	774	774	774	773	773	769	769	767	767	744	709	709	724	762	739
POSITION (TIME IN HOURS AND MINUTES) OF STRUCTURAL FEATURE ALONG UNIBOOM PROFILE (GRANTZ AND GREENBERG, 1981)	12:57	05:36	05:31	14:55	13:28	12:21	10:07	01:11	02:30	23:08	00:53 to 01:15	15:52 to 16:08	16:51	16:09	02:06	23:48	07:58	18:53½	10:45
STRUCTURAL FEATURE OBSERVED ON UNIBOOM PROFILE; QUERIED WHERE UNCERTAIN M MONOCLINE N NORMAL OR GRAVITY FAULT S SYNCLINE N_L LOW-ANGLE NORMAL FAULT R HIGH-ANGLE REVERSE FAULT	N?	M	M	M	M	M, N	N	N	M, N	M, N	M	M	M	M, N	M, N	M	N	M?, N	M
DOWNTHROWN SIDE OF FAULT OR MONOCLINE	NE	NE	NE	NE	NE	NE	NE	NE	NE	N	N	N	N	NE	NE	NE	NE	NE	NE

NORMAL FAULTS AND MONOCLINES OF TRANSITION ZONE BETWEEN BARROW AND BARTER ISLAND SECTORS

20	21	22	23	24	25	26	27[1]	28	29	30	31	32	33	34	35
740	740	740	739	724	724	763	763	763	723	723	Turn after 763		764	764	724
12:09	12:14	12:32½	09:20	06:37	06:10	21:00	21:26 and 21:30	21:36	01:32	01:36½	23:01	23:06	01:45	01:39½	05:11
N	N	N	M	M, N	M	M	M	M	M, N	M, N	M	M	N	M, N	M, N
NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE

FAULTS AND MONOCLINES OF SEISMOGENIC ZONE OF BARTER ISLAND SECTOR NEAR CAMDEN BAY

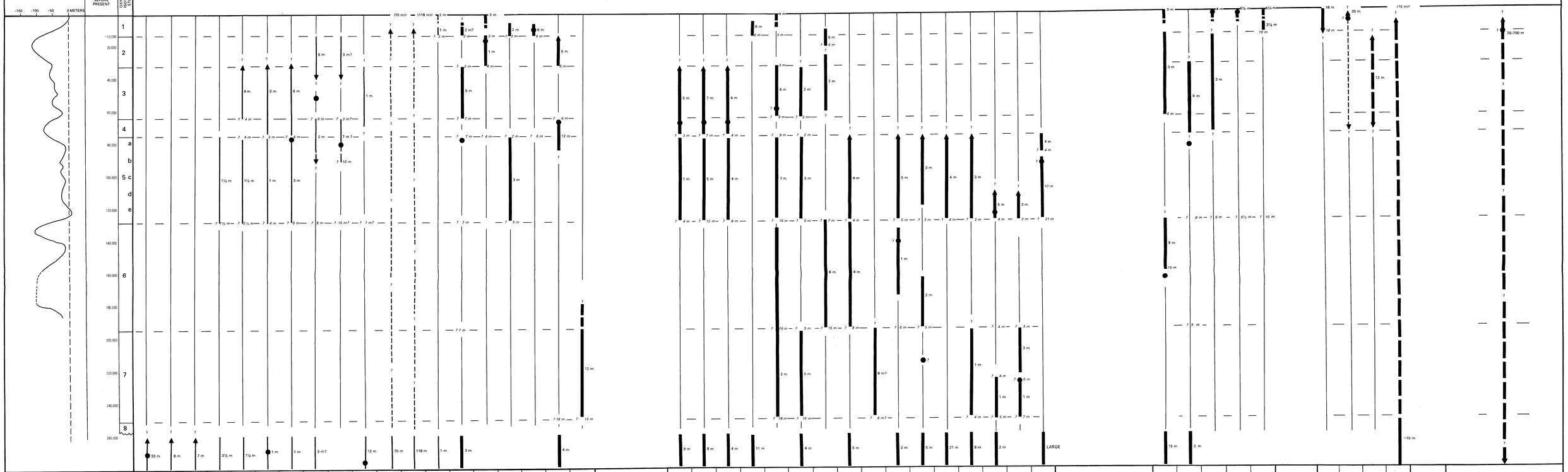
36[1]	37	38	39	40
720	726	726	726	726
03:52 to 03:57	13:01	14:12½	14:14½	14:22–27
M, N	N	HORST (?) R? N?		M
NW	NW	N	S	S

FAULTS AND SYNCLINES ON OUTER SHELF NEAR HEADWALL SCARPS OF LOW-ANGLE FAULTS/DEEP SLIDES

41	42	43	44
725	782	726	732
16:15	07:12	09:22 to 09:27	01:00
M	M, N_L	S	S
N	NE	S	N

LISTRIC NORMAL FAULTS BOUNDING LARGE SLUMPS AT HEAD OF CONTINENTAL SLOPE

45
Most N–S lines between 714 and 756
Near shelf break
N, NE



Note: See sheet 1 for locations and sheet 2 for cross sections of structural features tabulated in this chart.

INTERIOR—GEOLOGICAL SURVEY, RESTON, VA—1983—G83146

EXPLANATION

PROVISIONAL TIME INTERVAL DURING WHICH MONOCLINAL WARPING AND (OR) FAULTING OCCURRED, SHOWING INCREMENT OF VERTICAL COMPONENT OF DISPLACEMENT IN METERS.—Dashed where correlation with adjacent features uncertain; queried where amount of displacement doubtful. Lighter weight lines from areas west of Colville River delta where profiles are widely spaced and estimates of age are consequently speculative. Large dot indicates stratigraphic position of youngest faulted bed; queried where position doubtful. Arrows indicate that the interval of warping and (or) faulting may have extended higher or lower than shown by the vertical lines

CUMULATIVE VERTICAL COMPONENT OF DISPLACEMENT BY FAULTING OR MONOCLINAL WARPING, IN METERS, AT A BED OF KNOWN OR INFERRED AGE.—Query before number indicates provisional stratigraphic position; query after number indicates amount of displacement uncertain

[1]Combines displacement data for two structurally similar and presumably related faults or monoclines 500 m to 700 m apart

[2]Holocene sedimentary deposits at this locality are draped over Pleistocene or early Holocene structures. Sea-bed offset here is therefore largely or entirely Pleistocene or early Holocene

CHARACTER, DISPLACEMENT MAGNITUDE, AND PROVISIONAL DISPLACEMENT HISTORY OF LATE PLEISTOCENE AND HOLOCENE FAULTS AND MONOCLINES

MAP, CROSS SECTIONS, AND CHART SHOWING LATE QUATERNARY FAULTS, FOLDS AND EARTHQUAKE EPICENTERS ON THE ALASKAN BEAUFORT SHELF

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1983