

## PROVISIONAL CRUISE REPORT

VESSEL: MT Reul na Maidne ✓

OWNER: D B Macleod, Oiteag na Mara, Bruernish, North Bay, Barra,  
Outer Hebrides, Scotland Telephone: North Bay (08715) 384

LOCATION: Waverider Sites, west of South Uist, Hebrides

CRUISE 0830-1900 on 1 March 1981  
PERIOD:

PERSONNEL: J D Humphery HSO (Senior Scientist)  
R Gleason HSO

OBJECTIVES: To investigate poor performance of Offshore Waverider.  
To recover old mooring from Inshore (II) site.  
To deploy Inshore (III) Waverider.  
To survey around Inshore (III) site as time and conditions permit.

PROCEDURE AND METHODS: Reul na Maidne sailed to Lochboisdale from North Bay, Barra, arriving 0830. Loaded new Inshore Waverider and mooring, and associated equipment. Sailed from Lochboisdale approximately 0900.

Prepared new Waverider and mooring while passing through Sound of Barra. Headed straight for Offshore Waverider position. Noted 2 (SMBA?) spar buoys approximately 1 km W and NW of Offshore Waverider.

Offshore Waverider had lost rubber fender, but paintwork was undamaged. Buoy floated with approximately 100 mm of lower hemisphere above surface, and was suffering considerable pitch, roll and spin motions in the short sea. Aerial was tight in its socket, and undamaged, and a wavemeter test indicated considerable radiated power during 1200 hours transmission period. Buoy was left on mooring since no replacement had been brought.

Headed for old Inshore (II) position. Found and recovered old 'buoyant chain' mooring. Anchor had lost stock. Mooring had failed because rubber cord had pulled out of end-fitting. Steamed to new Inshore (III) position.

Lowered buoy over side by hand, paid out rubber cord and chain with trawlfloats. Lowered 50 kg fisherman's anchor to bottom on rope bight, recovered rope by winch and by hand. Noted depth, time and Decca position.

Steamed approximately 1 km N of Inshore (III) position, performed box survey to N, W and S of buoy. Returned to buoy, and surveyed due W (magnetic) to a point approximately SE of Offshore buoy.

Monitored 1500 hours transmission from Offshore buoy with radio direction finder - received satisfactorily.

Sailed for Lochboisdale, via Sound of Barra, arriving approximately 1830. Unloaded equipment; Reul na Maidne sailed for North Bay, Barra.

EQUIPMENT      Transmissions from Offshore Waverider were only occasionally being  
PERFORMANCE: received at the Range Control Building, despite the buoy being fitted  
with a transmitter-output amplifier. This was due to heavy long-  
range interference signals producing 2-20  $\mu$ V of noise at the  
receiver during the day. Those transmissions received satisfactorily  
produced a straight line down the centre of the chart, with  
occasional long-period variations and violent deviations from the  
mean line. These faults have not been identified. Short-range  
transmissions (up to about 2 km) were received on the OAR hand-held  
direction finder during the cruise period, but even these were subject  
to interference.

The Inshore (II) mooring failed because the rubber cord had pulled  
out of the lower end fitting during or shortly after the service  
visit on 17 January 1981. Anchor-stock was found to be missing on  
mooring recovery.

Inshore (III) Waverider and mooring had been prepared at IOS Taunton  
prior to departure, and were assembled on deck during passage through  
the Sound of Barra. Buoy and mooring laid without trouble, and good  
signals were received at the RA Range Control Building later.  
Furuno radar, Decca Navigator and Furuno echo-sounder all worked  
satisfactorily during cruise period.

ITINERARY:      1.3.81  
0830: Rendezvous with Reul na Maidne at Lochboisdale. Loaded equipment.  
0900: Departed Lochboisdale for Offshore Waverider position.  
1200: Alongside Offshore Waverider. Checked buoy. Sailed for  
Inshore (II) position.  
1300 approx: Recovered Inshore (II) mooring. Sailed for Inshore  
(III) position.  
1332: Laid Inshore (III) Waverider.  
1350: Commenced survey.  
1522: Finished survey, sailed for Lochboisdale.  
1830 approx: Arrived Lochboisdale, unloaded equipment; Reul na  
Maidne sailed for Barra.

WEATHER:      Forecasts were obtained from Benbecula and Prestwick meteorological  
offices on 28 February 1981 and from Prestwick at 0550 on 1 March 1981  
prior to sailing. Forecasts generally 4-6 ENE to SE. However at  
0600 on 1.3.81. wind blew E4. During work on west side, wind ENE 4,  
slight sea, no swell. No difficulty experienced coming alongside  
Waveriders and moorings, and there was little ship motion to reduce  
value of echo-sounding traces. However on return trip to Lochboisdale  
from Sound of Barra, wind NE 6 with steep seas approximately 1.5-2m.

POSITIONS:      Inshore (II) mooring recovered from position:-  
Decca Chain SE/MP (Hebridean)  
Green    D 37.2  
Purple  A 53.6  
Time and date: 1300 on 1.3.81.

Inshore (III) Waverider laid in position:-

Decca Chain 8E/MP (Hebridean)

Green D 31.40

Purple A 53.42

Time and date: 1332 on 1.3.81.

Depth - 24.9 m approximately, mid-tide

Prepared by: *J D Humphery* J D HUMPHERY

Approved by: *A.P. Salkield.* A P Salkield

Date: *26.3.81*

ECHO SOUNDER SURVEY W OF SOUTH UIST, 1 March 1981

Vessel: Reul na Maidne  
 Echo Sounder: Furuno  
 Decca Navigator Mk 21  
 Decca Chain 8E/MP (Hebridean)

Station List

<u>Fix</u>	<u>Time (GMT)</u>	<u>Green</u>	<u>Purple</u>	<u>Course magnetic</u>	<u>Comments</u>
1	1350	D 32.97	A 53.09	-	SOL
2	1352	D 32.99	A 53.20	310	
3	1354	D 33.12	A 53.40	311	
4	1357	D 33.22	A 53.66	300	
5	1359	D 33.26	A 53.80	303	
6	1401	D 33.27	A 54.00	297	
7	1402	D 33.30	A 54.20	304	
8	1404	D 33.32	A 54.40	298	
9	1405	D 33.35	A 54.50	-	Turning to Port End Run 1
10	1406	D 33.10	A 54.63	186	Run 2
11	1407	D 32.70	A 54.66	178	
12	1409	D 32.30	A 54.65	176	
13	1410	D 32.00	A 54.63	181	
14	1412	D 31.60	A 54.62	181	
15	1413	D 31.30	A 54.61	179	
16	1413	D 30.94	A 54.60	180	
17	1415	D 30.60	A 54.60	183	
18	1416	D 30.30	A 54.61	182	
19	Fix does not exist. Purple lane rolling				
20	1418	C 47.50	A 54.74	182	Turning to Port End Run 2
21	1420	C 47.12	A 54.71	118	Run 3
22	1422	C 47.00	A 54.50	121	
23	1424	C 46.90	A 54.30	121	
24	1425	C 46.83	A 54.10	122	
25	1427	C 46.74	A 53.90	120	
26	1429	C 46.65	A 53.70	119	
27	1431	C 46.58	A 53.50	121	
28	1433	C 46.45	A 53.30	119	Turning to Port End Run 3
29	1436	C 46.90	A 53.29	009	Run 4
30	1438	C 47.30	A 53.33	020	
31	1439	C 47.60	A 53.35	025	
32	1440	D 30.00	A 53.36	027	
33	1442	D 30.50	A 53.38	029	
34	1443	D 30.80	A 53.40	029	
35	1444	D 31.00	A 53.39	019	Turning to Port End Run 4
36	1445	D 31.37	A 53.43	-	Run 5. Passing I/S Waverider 50 m to Port
37	1447	D 31.15	A 53.60	271	
38	1449	D 30.95	A 53.80	263	
39	1451	D 30.72	A 54.00	269	
40	1453	D 30.58	A 54.20	267	

<u>Fix</u>	<u>Time (GMT)</u>	<u>Green</u>	<u>Purple</u>	<u>Course Magnetic</u>	<u>Comments</u>
41	1455	D 30.40	A 54.40	275	
42	1457	D 30.27	A 54.60	265	
-		Purple lane rolling		265	
43	1500	D 30.00	A 54.82	263	Fix suspect
44	1501	C 47.86	A 55.20	265	
45	1503	C 47.67	A 55.40	270	
46	1505	C 47.44	A 55.60	275	
47	1507	C 47.24	A 55.80	270	
48	1509	C 47.05	A 56.00	275	
49	1511	C 46.92	A 56.20	270	
50	1514	C 46.72	A 56.40	270	Purple lane rolling
51	1516	C 46.56	A 56.80	270	Purple lane rolling
52	1517	C 46.48	A 57.00	265	
53	1518	C 46.40	A 57.20	270	
54	1519	C 46.32	A 57.50	270	
55	1520	C 46.27	A 57.60	270	
56	1521	C 46.18	A 57.80	265	
57	1522	C 46.06	A 58.00	280	End Run 5

ABRIDGED DETAILS OF HEBRIDES VISIT FEBRUARY/MARCH 1981

Waverider Deployment: Buoy No 67201      Calibrated 13 November 1979  
 Sensitivity:            1. 826 Hz m<sup>-1</sup>  
 Position:                57° 17' 30" N      07° 29' 12" W  
 Decca readings:        Chain 8E/MP (Hebridean)  
                               Green D 31.40      Purple A 53.42  
 Date laid:                1 March 1981  
 Time laid:                1322  
 Depth:                    24.9 m mid-tide  
 Distance to receiver: 9.8 km approximately  
 Frequency:               26.990 MHz  
 Output meter reading: 7.5 on buoy  
 Battery voltages: 20.4 and 20.4 on 1 February 1981  
 Personnel:               J D Humphery;      R Gleason

Receiving system calibrations:

Inshore system: Eddystone Receiver No 964/7C/409  
 Working to:            Microdata logger 1036 (2-channel)  
 System calibrated: 2 March 1981  
 Sensitivity:            -64 Hz<sup>-1</sup>  
 Unlocked Display: -0000  
 Logged readings prefixed by: -  
 Microdata display channel: 6

Deepwater system: Eddystone Receiver No 964/7C/458  
 Working to:            Microdata logger 1036 (2-channel)  
 System calibrated: 2 March 1981  
 Sensitivity:            -64 Hz<sup>-1</sup>  
 Unlocked Display: + 0000  
 Logged readings prefixed by: +  
 Microdata display channel: 5

Offshore system: Eddystone Receiver No 964/7C/553  
 Working to:            Microdata logger 1029 (single channel)  
 System calibrated: 2 March 1981  
 Sensitivity:            -64 Hz<sup>-1</sup>  
 Unlocked display: -0000  
 Logged readings prefixed by: -  
 Microdata display channel: 6