DCF subsea	**GYROCOMPASS CALIBRATION TAPED** **OFFSET METHOD**	**SV-FR-002**

Job No.:	**27098**
Job Name:	**Search for HMAS SYDNEY II**
Client:	**Finding Sydney Foundation**

Date:	**Thursday, 28 February 2008**
Location:	**Geraldton**
Vessel:	**Geosounder**
Surveyor # 1:	**Nigel Meikle**
Surveyor # 2:	**Stephen Bagnell**

Gyro # 1	**Seapath**
Serial No.	**NA**
Gyro # 2	**Anshultz**
Serial No.	**NA**

Spheroid	GRS80
Semi Major Axis	6378137.000
Inv Flattening	298.25722000
Datum	GDA94
Projection	UTM
Central Meridian	117
False Easting	500000.000
False Northing	10000000.000
Scale Factor	0.9996

Baseline	10
Range	17.666
Bearing (G°)	18.424
Convergence	1.158

FIELD OBSERVATIONS

OBS	Time	Measurements		Logged Data	
		Bow	Stern	Gyro 1	Gyro 2
1	11:04:00	3.024	3.275	19.300	21.500
2	11:04:30	2.594	2.805	19.200	21.300
3	11:05:00	2.384	2.485	19.630	21.900
4	11:05:30	2.864	3.055	19.430	21.600
5	11:06:00	2.854	3.035	19.290	21.400
6	11:06:30	2.524	2.645	19.510	21.700
7	11:07:00	2.384	2.735	18.800	21.100
8	11:07:30	2.434	2.895	18.350	20.800
9	11:08:00	2.474	2.805	18.870	21.100
10	11:08:30	2.434	2.755	18.970	21.300
11	11:09:00	2.574	2.895	18.990	21.300
12	11:09:30	2.554	2.975	18.500	21.000
13	11:10:00	2.604	2.895	18.930	21.400
14	11:10:30	2.434	2.865	18.490	20.900
15	11:11:00	2.604	2.845	19.050	21.500
16	11:11:30	2.464	2.945	18.360	20.700
17	11:12:00	2.694	3.075	18.490	21.100
18	11:12:30	2.424	2.875	18.240	20.800
19	11:13:00	2.674	2.825	19.450	22.100
20	11:13:30	2.584	3.035	18.440	20.900

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CALIBRATION RESULTS

Obs	Time	Calculated	Observed		Calculated	
		Vessel Heading	Gyro 1 Heading	Gyro 2 Heading	Gyro 1 C-O	Gyro 2 C-O
1	11:04:00	18.768	19.30	21.500	-0.532	-2.732
2	11:04:30	18.898	19.20	21.300	-0.302	-2.402
3	11:05:00	19.255	19.63	21.900	-0.375	-2.645
4	11:05:30	18.963	19.43	21.600	-0.467	-2.637
5	11:06:00	18.995	19.29	21.400	-0.295	-2.405
6	11:06:30	19.190	19.51	21.700	-0.320	-2.510
7	11:07:00	18.444	18.80	21.100	-0.356	-2.656
8	11:07:30	18.087	18.35	20.800	-0.263	-2.713
9	11:08:00	18.509	18.87	21.100	-0.361	-2.591
10	11:08:30	18.541	18.97	21.300	-0.429	-2.759
11	11:09:00	18.541	18.99	21.300	-0.449	-2.759
12	11:09:30	18.217	18.50	21.000	-0.283	-2.783
13	11:10:00	18.638	18.93	21.400	-0.292	-2.762
14	11:10:30	18.185	18.49	20.900	-0.305	-2.715
15	11:11:00	18.801	19.05	21.500	-0.249	-2.699
16	11:11:30	18.022	18.36	20.700	-0.338	-2.678
17	11:12:00	18.347	18.49	21.100	-0.143	-2.753
18	11:12:30	18.120	18.24	20.800	-0.120	-2.680
19	11:13:00	19.092	19.45	22.100	-0.358	-3.008
20	11:13:30	18.120	18.44	20.900	-0.320	-2.780

	Gyro 1	Gyro 2
Average C-O	**-0.3279**	**-2.6834**
Standard Deviation	**0.0985**	**0.1359**

Notes: Wharf alignment calculated from station marks MCP #1 and MCP #2 established by RTK GPS.
C-O corrections applied in QINSy navigation software.

Party Chief Nigel Meikle _____

Client Representative Rob Brunsima _____

Job No.:	27098
Job Name:	Search for HMAS SYDNEY II
Client:	Finding Sydney Foundation
Date:	28/02/2008
Location:	Geraldton
Vessel:	Geosounder
Surveyor # 1:	Nigel Meikle
Surveyor # 2:	Stephen Bagnell

Gyro # 1	Seapath
Serial No.	
Gyro # 2	Anshultz
Serial No.	

Spheroid	GRS80
Semi Major Axis	6378137
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Datum	GDA94
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Baseline	
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Bearing (G°)	18.424
Convergence	1.158

Step 1 - Input Taped Offset Measurements				Step 3 - Input Observed Gyro Readings		Step 2 - Calculate Vessel Heading		Step 4 - Calculate C-O's	
Obs	Time	Bow Reading	Stern Reading	Gyro 1 (T°)	Gyro 2 (T°)	Hdg (G°)	Hdg (T°)	Gyro 1 (T°)	Gyro 2 (T°)
1	**11:04:00**	3.02	3.28	19.300	21.500	17.610	18.768	-0.532	-2.732
2	**11:04:30**	2.59	2.81	19.200	21.300	17.739	18.898	-0.302	-2.402
3	**11:05:00**	2.38	2.49	19.630	21.900	18.096	19.255	-0.375	-2.645
4	**11:05:30**	2.86	3.06	19.430	21.600	17.804	18.963	-0.467	-2.637
5	**11:06:00**	2.85	3.04	19.290	21.400	17.837	18.995	-0.295	-2.405
6	**11:06:30**	2.52	2.65	19.510	21.700	18.031	19.190	-0.320	-2.510
7	**11:07:00**	2.38	2.74	18.800	21.100	17.285	18.444	-0.356	-2.656
8	**11:07:30**	2.43	2.90	18.350	20.800	16.929	18.087	-0.263	-2.713
9	**11:08:00**	2.47	2.81	18.870	21.100	17.350	18.509	-0.361	-2.591
10	**11:08:30**	2.43	2.76	18.970	21.300	17.383	18.541	-0.429	-2.759
11	**11:09:00**	2.57	2.90	18.990	21.300	17.383	18.541	-0.449	-2.759
12	**11:09:30**	2.55	2.98	18.500	21.000	17.059	18.217	-0.283	-2.783
13	**11:10:00**	2.60	2.90	18.930	21.400	17.480	18.638	-0.292	-2.762
14	**11:10:30**	2.43	2.87	18.490	20.900	17.026	18.185	-0.305	-2.715
15	**11:11:00**	2.60	2.85	19.050	21.500	17.642	18.801	-0.249	-2.699
16	**11:11:30**	2.46	2.95	18.360	20.700	16.864	18.022	-0.338	-2.678
17	**11:12:00**	2.69	3.08	18.490	21.100	17.188	18.347	-0.143	-2.753
18	**11:12:30**	2.42	2.88	18.240	20.800	16.961	18.120	-0.120	-2.680
19	**11:13:00**	2.67	2.83	19.450	22.100	17.934	19.092	-0.358	-3.008
20	**11:13:30**	2.58	3.04	18.440	20.900	16.961	18.120	-0.320	-2.780

Results	
Average C-O's	
Gyro 1 (T°)	Gyro 2 (T°)
-0.328	-2.683

Standard Deviations	
Gyro 1 (T°)	Gyro 2 (T°)
0.098	0.136