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Seq# 004		Line Name: MGL2316004CNAP1 Line Brg : 180.5 °		NAVIGATION LINE LOGS		DATE: 2023-11-25 JULIAN DAY: 329		Lamont-Doherty Earth Observatory COLUMBIA UNIVERSITY   EARTH INSTITUTE											
CLIENT:UTIG/WHOI/NSF				SURVEY: Puerto Rico MCS		AREA: Puerto Rico													
DC SOL: -14.4 m DC EOL: 331.1 m BSP SOL: 5.3 kts BSP EOL: 5.3 kts		DEPTH SOL : 5130.1 m DEPTH EOL : 7947.6 m FEATHER SOL: N/A ° FEATHER EOL: N/A ° MAX FEATHER: N/A °		NAVIGATION SYSTEM USED: C-Nav3050 - Primary NAVIGATION SYSTEM USED: SeaPath 330 NAVIGATION SYSTEM USED: C-Nav3050-Stern Mounted															
WEATHER WIND SOL: NE 12 kts WIND EOL: E 12 kts SEAS SOL: 1 m SEAS EOL: 1 m		shift hours 0:00-12:00 12:00 - 24:00		Nav Aaron Martin		shift hours 0:00-12:00 12:00 - 24:00		Acq Gilles Guerin											
GRAVITY METER: BMG-II: used, SN223 MAGNETOMETER: Geometrics 882																			
SP	Orca Ref	UTC	EVENT	COMMENTS															
2002	1002	22:12	SOL	MGL2316004CNAP1 - 35 guns 6240 in3															
				VESSEL POSITION															
						Shotpoints	Latitude (N)	Longitude (W)											
2059	1059	23:59	LSOD	Last shot of JD 329		First SP	2002	20°53'42.33"	66°28'17.08"										
2060	1060	00:01	FSOD	First shot of JD 330		LSP	2376	19°52'54.10"	66°29'03.71"										
2376	1376	10:45	EOL	MGL2316004CNAP1 - 35 guns 6240 in3															
						Latitude (N)	Longitude (W)												
						FSP	2002	20.895091	-66.471411										
						LSP	2376	19.881694	-66.484365										
				<table border="1"> <tr> <td>NRP – Stern</td> <td>29.2m</td> </tr> <tr> <td>NRP – COS</td> <td>276.0m</td> </tr> <tr> <td>NRP – CNG</td> <td>N/A</td> </tr> <tr> <td>COS – CNG</td> <td>N/A</td> </tr> <tr> <td>NRP – CMP</td> <td>N/A</td> </tr> </table>						NRP – Stern	29.2m	NRP – COS	276.0m	NRP – CNG	N/A	COS – CNG	N/A	NRP – CMP	N/A
NRP – Stern	29.2m																		
NRP – COS	276.0m																		
NRP – CNG	N/A																		
COS – CNG	N/A																		
NRP – CMP	N/A																		
Posnet locations & remarks:				Forward	Center														
Tailbuoy #1	N/A		Gun string #1	GOOD	GOOD														
Head Float #1	N/A		Gun string #2	ABSENT	PARTIAL														
			Gun string #3	GOOD	GOOD														
			Gun string #4	GOOD	GOOD														
Compasses						SP spacing: 300m													
D.I.s						line status: Incomplete													
PROCESSING NOTES G1R4 failed SP2317 to EOL ORCA NRT Produced P1						Acronyms key DC SOL Distance Crossed at Start of Line DC EOL Distance Crossed at End of Line BSP Bottom Speed, aka SOG: Speed Over Ground FEATHER The angle from the boat to the TB (Tail Buoy) NRP Navigation Reference Point COS Center of Source CNG Center Near Group CMP Common Mid-point													
Overall Comments																			

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Seq# 009		Line Name: MGL2316009TESTP1 Line Brg : 180.6 °		NAVIGATION LINE LOGS		DATE: 2023-11-28 JULIAN DAY: 332		Lamont-Doherty Earth Observatory COLUMBIA UNIVERSITY   EARTH INSTITUTE	
CLIENT:UTIG/WHOI/NSF      SURVEY: Puerto Rico MCS      AREA: Puerto Rico									
DC SOL: -204.0 m DC EOL: 8.0 m BSP SOL: 5.3 kts BSP EOL: 5.1 kts		DEPTH SOL : 1540.3 m DEPTH EOL : 4674.4 m FEATHER SOL: N/A ° FEATHER EOL: N/A ° MAX FEATHER: N/A °		NAVIGATION SYSTEM USED: C-Nav3050 - Primary NAVIGATION SYSTEM USED: SeaPath 330 NAVIGATION SYSTEM USED: C-Nav3050-Stern Mounted					
WEATHER WIND SOL: E 14 kts WIND EOL: E 17 kts SEAS SOL: 1 m SEAS EOL: 1 m		shift hours 0:00-12:00 12:00 - 24:00		Nav Aaron Martin		shift hours 0:00-12:00 12:00 - 24:00		Acq Gilles Guerin Ian Davis	
GRAVITY METER: BMG-II: used, SN223 MAGNETOMETER: Geometrics 882									
SP	Orca Ref	UTC	EVENT	COMMENTS					
5001	1001	23:08	SOL	MGL2316009CSP1 - 35 guns 6240 in3					
5063	1063	23:59	LSOD	Last shot of JD 332					
5700	1700	08:34	EOL	MGL2316009CSP1 - 35 guns 6240 in3					
Posnet locations & remarks:				Forward	Center				
Tailbuoy #1	N/A		Gun string #1	GOOD	ABSENT				
Head Float #1	N/A		Gun string #2	ABSENT	GOOD				
			Gun string #3	GOOD	GOOD				
			Gun string #4	GOOD	GOOD				
Compasses		N/A							
D.I.s		N/A							
PROCESSING NOTES				Acronyms key					
SP 5173 - UV spike sends line to Reprocess status				DC SOL Distance Crossed at Start of Line					
Seispos Reprocessed P1				DC EOL Distance Crossed at End of Line					
				BSP Bottom Speed, aka SOG: Speed Over Ground					
				FEATHER The angle from the boat to the TB (Tail Buoy)					
				NRP Navigation Reference Point					
				COS Center of Source					
				CNG Center Near Group					
				CMP Common Mid-point					
Overall Comments									

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Seq# 012		Line Name: MGL2316012EFP1 Line Brg : Racetrack °		NAVIGATION LINE LOGS		DATE: 2023-12-06 JULIAN DAY: 340		Lamont-Doherty Earth Observatory COLUMBIA UNIVERSITY   EARTH INSTITUTE											
CLIENT:UTIG/WHOI/NSF				SURVEY: Puerto Rico MCS		AREA: Puerto Rico													
DC SOL: -322.9 m DC EOL: -1.4 m BSP SOL: 5.0 kts BSP EOL: 5.1 kts		DEPTH SOL : 5148.3 m DEPTH EOL : 5153.6 m FEATHER SOL: N/A ° FEATHER EOL: N/A ° MAX FEATHER: N/A °		NAVIGATION SYSTEM USED: C-Nav3050 - Primary NAVIGATION SYSTEM USED: SeaPath 330 NAVIGATION SYSTEM USED: C-Nav3050-Stern Mounted															
WEATHER WIND SOL: SE 12 kts WIND EOL: NE 17 kts SEAS SOL: 1.5 m SEAS EOL: 1 m		shift hours 0:00-12:00 12:00 - 24:00		Nav Aaron Martin		shift hours 0:00-12:00 12:00 - 24:00		Acq Gilles Guerin Ian Davis											
GRAVITY METER: BMG-II: used, SN223 MAGNETOMETER: Geometrics 882																			
SP	Orca Ref	UTC	EVENT	COMMENTS															
6994	994	16:00	SOL	MGL2316012EFP1 - 36 guns 6600 in3															
				VESSEL POSITION															
						Shotpoints	Latitude (N)		Longitude (W)										
				First SP		6994	20°45'01.06"		63°54'03.86"										
				LSP		8003	20°45'00.39"		63°54'01.49"										
7216	1216	23:59	LSOD	Last shot of JD 340															
7230	1230	00:27		S1G1 disabled after multiple firing errors - new volume 35 guns 6240in3															
7559	1559	11:46		Pressure dropped to 1400 psi															
7564	1564	11:57		airleak, gunstring 1 disabled, volume 17 guns 4950 in3															
7569	1569	12:10		airleak fixed, string 1 back online minus S1G1, new volume 35 guns 6240 in3															
7887	1887	23:58	LSOD	Last shot of JD 341															
8003	2003	03:49	EOL	MGL2316012EFP1 - 35 guns 6240 in3															
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NRP – COS	276.0m																		
NRP – CNG	N/A																		
COS – CNG	N/A																		
NRP – CMP	N/A																		
Posnet locations & remarks:				Forward	Center														
Tailbuoy #1	N/A		Gun string #1	GOOD	GOOD														
Head Float #1	N/A		Gun string #2	ABSENT	GOOD														
			Gun string #3	GOOD	GOOD														
			Gun string #4	GOOD	GOOD														
Compasses				N/A															
D.I.s				N/A															
PROCESSING NOTES				Acronyms key															
Orca NRT produced P1				DC SOL Distance Crossed at Start of Line															
				DC EOL Distance Crossed at End of Line															
				BSP Bottom Speed, aka SOG: Speed Over Ground															
				FEATHER The angle from the boat to the TB (Tail Buoy)															
				NRP Navigation Reference Point															
				COS Center of Source															
				CNG Center Near Group															
				CMP Common Mid-point															
Overall Comments																			

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