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Seq# 006				Line Name: MGL2309006P11003		DATE: 2023-07-23		Lamont-Doherty Earth Observatory COLUMBIA UNIVERSITY   EARTH INSTITUTE						
				Line Brg : 128.1 °		JULIAN DAY: 203								
CLIENT: NSF - Harm Van Avendonk				SURVEY: MCS		AREA: Blake Plateau								
DC SOL:	-4.2 m			DEPTH SOL :	370.8 m	NAVIGATION SYSTEM USED: C-Nav3050 - Primary								
DC EOL:	-14.1 m			DEPTH EOL :	4635.5 m	NAVIGATION SYSTEM USED: SeaPath 330								
BSP SOL:	4.5 kts			FEATHER SOL:	-107.32 °	NAVIGATION SYSTEM USED: C-Nav3050-Stern Mounted								
BSP EOL:	4.6 kts			FEATHER EOL:	-3.25 °									
WEATHER				MAX FEATHER: 112.94 °		GRAVITY METER: BMG-II: used, SN223								
				MAGNETOMETER: Geometrics 882										
WIND SOL:	13 kts			shift hours	Nav	shift hours	Acq							
WIND EOL:	3 kts			12:00 - 24:00	Claire Mayorga	12:00 - 24:00	Gilles Guerin							
SEAS SOL:	1 m			0:00-12:00	Sara Pierson	00:00 - 12:00	Riley Lopez							
SEAS EOL:	0.5 m													
SP	Orca Ref	UTC	EVENT	COMMENTS										
18060	1061	19:59	SOL	SOL- 36 Guns @ 6600 cuin										
				streamer is at 12m depth										
18738	1739	23:59	MSP	Last SP of day (7/22/23):										
18739	1740	00:00		First SP of day (7/23/23):										
19219	2220	-02:45		SRV <20.0, due to currents										
19301	2302	03:11		Ship deviated from line due to current (SOG: 5.2, STW: 3.3, DC: -280)										
19516	2517	04:19		DC update: up to -632										
19697	2698	05:16		SRV >20										
19840	2841	-06:00		Max DC ~1100m; consistent improvement from this point forward										
19900	2901	06:27		SRV <20 due to strong currents (SOG 5.3, STW 3.7, DC: -819)										
19930	2931	-06:36:00		Strong current (possibly rip current) (SOG 6.4, STW: 3.5, DC: -926)										
19936	2937	06:39		Birds 1-10, compass problem & swift depth change due to current (bird 6 @ ~20m depth, Tension ~7500)										
19943	2944	06:06		Birds 1-20, compass problem & depth change. (depth change seen above propagating down streamer)										
20549	3560	10:15		Birds 1-4 intermittent compass data (approx 1 hour)										
21651	4652	16:56		String 2 forward gun (POSNET) connection gone										
22633	5634	23:59		Last SP of day (7/23/23):										
22634	5635	00:00		First SP of day (7/24/23):										
23152	6153	04:56		Re-estimate of all GPS positions										
23170	6171	-04:15		String 3 forward pod satellite (POSNET) connection returned										
24027	7028	11:02		String 3 aft pod bad adjust (satellite/POSNET connection fine)										

Seq# 007		Line Name: MGL2309007P11004		DATE: 2023-07-25		Lamont-Doherty Earth Observatory	
Line Brg :		295.2 °		JULIAN DAY: 206		COLUMBIA UNIVERSITY   EARTH INSTITUTE	
		CLIENT: NSF - Harm Van Avendonk		SURVEY: MCS		AREA: Blake Plateau	
DC SOL: 3.0 m		DEPTH SOL : 4677.8 m		NAVIGATION SYSTEM USED: C-Nav3050 - Primary			
DC EOL: 6378.4 m		DEPTH EOL : 417.4 m		NAVIGATION SYSTEM USED: SeaPath 330			
BSP SOL: 4.7 kts		FEATHER SOL: -2.13 °		NAVIGATION SYSTEM USED: C-Nav3050-Stern Mounted			
BSP EOL: 2.7 kts		FEATHER EOL: 45.77 °					
WEATHER		MAX FEATHER: 61.93 °		GRAVITY METER: BMG-II: used, SN223			
WIND SOL: 0 kts				MAGNETOMETER: Geometrics 882			
WIND EOL: 13 kts		shift hours Nav shift hours Acc					
SEAS SOL: 0 m		12:00 - 24:00 Claire Mayorga 12:00 - 24:00 Gilles Guerin					
SEAS EOL: 1 m		0:00-12:00 Sara Pierson 00:00 - 12:00 Riley Lopez					
SP	Orca Ref	UTC	EVENT	COMMENTS			
28896	897	17:30	SOL	SOL- 1 Gun @ 40 cuin - Soft Start			
				streamer is at 12m depth			
28959	960	17:52		36 Guns @ 6600 cuin			
29866	1967	23:59	MSP	Last SP of day (7/25/23):			
29967	1968	00:00		First SP of day (7/26/23):			
30261	2262	01:45		String 3 forward pod lost POSNET connection			
31521	3522	09:10		String 1 forward pod lost POSNET connection			
33651	5652	21:21		G1R1 and G1R5 were knocked out			
34108	6109	23:59	MSP	Last SP of day (7/26/23):			
34109	6110	00:00		First SP of day (7/27/23):			
34312	6313	01:11		Line bearing adjusted to 306.0 to stay on line			
36659	8660	15:17		Feather increasing due to gulf stream effects (~10deg currently)			
37682	9683	23:00		Feather increasing due to gulf stream effects (8.8deg currently)			
37783	9784	23:59	MSP	Last SP of day (7/27/23):			
37784	9785	00:00		First SP of day (7/28/23):			
38175		04:24		Feather continuing to increase due to gulf stream effects (23 deg currently) (SRV ~43)			
38177	10178	04:25		Birds 1-10 intermittent compass (drops approx every 30min for 2-10 min then reconnects)			
38231	10232	05:04		Having trouble maintaining line due to gulf stream, increasing speed (SOG 2.0; STW 5.2; SRV 48, DC 10m)			
38294	10295	05:58		Update on SRV 53.9			
38453	10454	08:12		String 2 aft pod lost POSNET connection			
38462	10463	08:20		String 2 aft pod connection returned			
38506	10507	09:04		String 2 aft pod POSNET connection consistently intermittent			
38512	10513	09:13		SOG ~0.9-1.0 Due to gulf stream (current pointing aft at 4.5 knots)			
38730	10731	13:19		Deviation from line due to gulf stream effects			
38992	10993	16:45	EOL	EOL- 36 Guns @ 6600 cuin			
				streamer is at 12m depth			
				SP spacing: 50.0m			
				line status: Complete			
Posnet locations & remarks: good - none - intermittent				Forward	Center		
Tailbuoy #1	GOOD		Gun string #1	Absent	GOOD		
Head Float #1	GOOD		Gun string #2	GOOD	Intermittent		
			Gun string #3	Absent	GOOD		
			Gun string #4	GOOD	GOOD		
Compasses	GOOD						
D.I.s	GOOD						
PROCESSING NOTES							
Overall Comments							

Seq# 008

Line Name: MGL2309008P11007  
Line Brg : 126.0 °

NAVIGATION  
LINE LOGS

DATE: 2023-07-29  
JULIAN DAY: 210  
Lamont-Doherty Earth Observatory  
COLUMBIA UNIVERSITY | EARTH INSTITUTE

- 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
  - CMP Common Mid-point

CLIENT: NSF - Harm Van Avendonk										SURVEY: MCS										AREA: Blake Plateau									
DC SOL: -108.2 m					DEPTH SOL : 495.0 m					NAVIGATION SYSTEM USED: C-Nav3050 - Primary																			
DC EOL: -4.7 m					DEPTH EOL : 1060.0 m					NAVIGATION SYSTEM USED: SeaPath 330																			
BSP SOL: 2.4 kts					FEATHER SOL: -2.61 °					NAVIGATION SYSTEM USED: C-Nav3050-Stern Mounted																			
BSP EOL: 4.7 kts					FEATHER EOL: -0.56 °																								
WEATHER					MAX FEATHER: 87.79 °					GRAVITY METER: BMG-II: used, SN223																			
WIND SOL: S18 kts										MAGNETOMETER: Geometrics 882																			
WIND EOL: NW 10 kts					shift hours Nav shift hours Acq																								
SEAS SOL: 1.5 m					12:00 - 24:00 Claire Mayorga 12:00 - 24:00 Gilles Guerin																								
SEAS EOL: 1 m					0:00-12:00 Sara Pierson 00:00 - 12:00 Riley Lopez																								
SP Orca Ref UTC EVENT SOL					COMMENTS															VESSEL POSITION									
39987 988 07:12					SOL - soft start - 1 Guns @ 40 cuin																								
					streamer is at 12 m depth																								
39997 998 07:21					Bird compasses 1-20 intermittent																								
39999 1000 07:22					String 2 aft pod (POSNET) connection intermittent															FSP 39987 31°29'23.09" 79°25'11.94"									
40017 1018 07:33					Ramp up complete, first full shot - 36 guns 6600 cuin															LSP 46738 29°24'16.84" 76°59'29.35"									
40018 1019 07:34					Difficulty maintaining heading due to gulf stream effects (Feather ~ -5deg)																								
40090 1091 08:58					Continued difficulty due to gulf stream (heading 210deg, SOG 0.6, STW 5.3, SRV ~160, Feather -66deg)																								
40163 1164 13:04					Difficulty maintaining line due to gulf stream effects (not moving) Shifting off line 10deg (207deg to 197deg)																								
40182 1183 13:27					Increasing DC (-489m) and decreasing feather (max at -86deg approx 5min ago, currently -84deg)																								
40187 1188 13:36					Guns disabled, compressor issue															FSP 39987 31.489746 -79.419983									
40192 1193 13:43					Guns enabled, compressor issue solved															LSP 46738 29.404677 -76.991487									
40505 1506 18:23					Shutdown for turtle sighting																								
40523 1524 18:39					Back to full volume																								
40193 1194 13:45					String 2 aft pod (POSNET) connection knocked out																								
40730 1731 21:27					Ship back on line (DC: 68.8, Feather: -69.4)																								
40700 1701 21:20					Approximate return to normal speed and course after fighting currents																								
41133 2134 23:59					Last SP of day (7/29/23):																								
41134 2135 00:00					First SP of day (7/30/23):																								
42594 3595 09:46					POSNET entirely down, closed and restart of the system. All gps pods absent.																								
42603 3604 09:50					POSNET reconnected, all pods present (except those KO'd since SOL: Strng 1 &3 forward, and Sting 2 aft)																								
42609 3610 09:52					POSNET down, by accident this time																								
42611 3612 09:53					POSNET reconnected, all pods present (except those KO'd since SOL: Strng 1 &3 forward, and Sting 2 aft)																								
43393 4394 14:39					String 4 aft pod disconnected																								
43484 4485 15:13					String 4 aft pod reconnected																								
43488 4489 15:14					String 4 aft pod disconnected																								
43492 4493 15:15					String 4 aft pod reconnected - INTERMITTENT behavior																								
45025 6026 23:59					Last SP of day (7/30/23):																								
45026 6027 00:00					First SP of day (7/31/23):																								
45146 6147 00:40					Line bearing adjusted to 157.7 to stay on line																								
46738 7739 09:47					EOL- 36 Guns @ 6600 cuin																								
					streamer is at 12 m depth																								

SP spacing: 50.0m

NRP - Stern	29.2m
NRP - COS	276.6m
NRP - CNG	389.20m
COS - CNG	112.60m
NRP - CMP	332.90m



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Seq# 012

Line Name: MGL2309012P31009

Line Brg : 304.5 °

NAVIGATION LINE LOGS

DATE: 2023-08-01

JULIAN DAY: 213

Lamont-Doherty Earth Observatory

COLUMBIA UNIVERSITY | EARTH INSTITUTE

CLIENT: NSF - Harm Van Avendonk

SURVEY: MCS

AREA: Blake Plateau

DC SOL: 471.8 m

DC EOL: 8.5 m

BSP SOL: 4.2 kts

BSP EOL: 3.7 kts

WEATHER

WIND SOL: 8.6 kts

WIND EOL: 5 kts

SEAS SOL: 1 m

SEAS EOL: 1 m

DEPTH SOL : 826.5 m

DEPTH EOL : 805.2 m

FEATHER SOL: 153.37 °

FEATHER EOL: 2.62 °

MAX FEATHER: 153.37 °

GRAVITY METER: BMG-II: used, SN223

MAGNETOMETER: Geometrics 882

shift hours

Nav

shift hours

Acq

0:00 - 24:00

Claire Mayorga

12:00 - 24:00

Gilles Guerin

0:00-12:00

Sara Pierson

00:00 - 12:00

Riley Lopez

SP

Orca Ref

UTC

EVENT

SOL

COMMENTS

54780

2781

20:03

SOL

SOL- 1 Guns @ 40 cuin

streamer is at 12m depth

Gun ramp up

End of ramp up - volume 36 guns 6600 in3

Gun String 1 and 2 disabled to recover (air leak on String 1)

String 1 and String 2 knocked out (G1R2, G1R3) (G1R1 & G1R4 already knocked out)

VESEL POSITION

Shotpoints

Latitude (N)

Longitude (W)

FSP

54780

29°53'21.49"

77°43'58.92"

LSP

55538

30°05'14.14"

78°03'11.86"

Latitude (N)

Longitude (W)

FSP

54780

29.889303

77.733033

LSP

55538

30.087261

78.053295

55445

3446

23:59

MSP

Last SP of day (08/01/2023)

First SP of day (08/02/2023)

55404

3405

23:43

55415

3416

23:47

55538

3539

00:41

EOL

EOL- 18 Guns @ 3300 cuin

streamer is at 12m depth

Posnet locations & remarks: good - none - intermittent

Forward

Center

Tailbuoy #1

GOOD

GOOD

Gun string #1

Absent

GOOD

Head Float #1

GOOD

GOOD

Gun string #2

GOOD

Absent

GOOD

Gun string #3

Absent

GOOD

GOOD

Gun string #4

GOOD

GOOD

Compasses

GOOD

D.I.s

GOOD

CESSING NOTES

Tight bend in the strmr at SOL affecting compasses and strmr positioning.

G1R1, G1R2, G1R5; No Data

GS1 & GS2 disabled; 55405 - EOL, COS positioned for active guns

Overall Comments: Tight curve in strmr at SOL dt turn. GS1 & GS2 disabled 55405 - EOL, COS position shifted to active guns' center.

Overall Comments

[illegible]

Seq# 014

Line Name: MGL2309014P41009  
Line Brg : 304.5 °

NAVIGATION  
LINE LOGS

DATE: 2023-08-02  
JULIAN DAY: 214

Lamont-Doherty Earth Observatory  
COLUMBIA UNIVERSITY | EARTH INSTITUTE

- 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
  - CMP Common Mid-point

DC SOL:		-2.2 m	CLIENT: NSF - Harm Van Avendonk		SURVEY: MCS		AREA: Blake Plateau	
DC EOL:		-6.0 m	DEPTH SOL :		814.2 m		NAVIGATION SYSTEM USED: C-Nav3050 - Primary	
BSP SOL:		3.4 kts	DEPTH EOL :		805.5 m		NAVIGATION SYSTEM USED: SeaPath 330	
BSP EOL:		4.4 kts	FEATHER SOL:		-95.79 °		NAVIGATION SYSTEM USED: C-Nav3050-Stern Mounted	
			FEATHER EOL:		2.60 °			
			MAX FEATHER:		95.79 °		GRAVITY METER: BMG-II: used, SN223	
WEATHER							MAGNETOMETER: Geometrics 882	
WIND SOL:		6 kts	shift hours		Nav		shift hours	
WIND EOL:		11 kts					Acq	
SEAS SOL:		1 m	12:00 - 24:00		Claire Mayorga		12:00 - 24:00	
SEAS EOL:		1 m	0:00-12:00		Sara Pierson		00:00 - 12:00	
							Riley Lopez	
SP		Orca Ref	UTC	EVENT	COMMENTS			
58166		3167	05:55	SOL	SOL- 1 Guns @ 40 cuin - ramp up occurring			
					streamer is at 12m depth			
58212		3213	06:16		Guns at full volume			
59009		4010	11:06		Bad Adjust on String 4 aft gps pod (POSNET) -- be alert for possible future intermittent behavior			
					Line ended due to air leak on String 4			

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Acronyms key	
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