Seq # 001

Line Name: MGL11061004

Line Brg : 25.902 °

NAVIGATION

LINE LOGS

DATE: 2011-04-12

JULIAN DAY: 102

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY EARTH INSTITUTE

CLIENT: NSF/Bangs

SURVEY: CRISP 3D

MGL1106

DC SOL : 5.9m
DC EOL : -17.6m
SMG SOL: 4.3 knots
SMG EOL: 4.5 knots

WEATHER

WIND SOL: 3 knots
WIND EOL: 6 knots
SEAS SOL: 1m
SEAS EOL: 1m

DEPTH SOL : 2420.0m
DEPTH EOL : 91.8m
FEATHER SOL: -49.8 °
FEATHER EOL: -8.0 °
MAX FEATHER: -8.0 °

00:00 – 04:00 local =>	DN	12:00 – 16:00 local =>	MM
04:00 – 08:00 local =>	DN	16:00 – 20:00 local =>	MM
08:00 – 12:00 local =>	DN	20:00 – 00:00 local =>	MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS
		GPS	GPS on string 3 tilted
768	13:06	SOL	Start of line
1001	13:42	FFSP	Start of grid line
3223	20:27	LFSP	Last full fold shot point
3341	20:49	LSP	End of line
3351	20:51	EOL	Last nav shot.

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	1001	08° 31' 44.715"	84° 17' 48.097"
LFSP	3223	08° 25' 44.372"	84° 04' 23.391"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 MGL11061004.p190

P2 MGL11061004.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	good	Gun string #2	good
Tailbuoy #3	good	Gun string #3	tilted
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

MGL11061004.LMN MGL11061004.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Complete

Seq # 002

Line Name: MGL11061156 **NAVIGATION**

Line Brg : 205.902 ° **LINE LOGS**

DATE: 2011-04-12 Lamont-Doherty Earth Observatory

JULIAN DAY: 102

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -44.4m	DEPTH SOL : 68.7m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL : -54.4m	DEPTH EOL : 2320.5m	NAVIGATION SYSTEM USED:	SeaPath 200
SMG SOL: 4.4 knots	FEATHER SOL: 5.4 °	NAVIGATION SYSTEM USED:	C-Nav2000
SMG EOL: 4.4 knots	FEATHER EOL: 6.8 °	GRAVITY METER:	BMG-II: used, SN210
WEATHER	MAX FEATHER: 25.8 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL: S 5 knots		MAG DEC USED :	0.50°

WIND EOL: N 8.0 knots	00:00 – 04:00 local =>	DN	12:00 – 16:00 local =>	MM	
SEAS SOL: SW 3 ft	04:00 – 08:00 local =>	DN	16:00 – 20:00 local =>	MM	
SEAS EOL: 1-2m	08:00 – 12:00 local =>	DN	20:00 – 00:00 local =>	MM	

SP	TIME(UTC)	EVENT	COMMENTS
3417	22:31	SOL	Start of line
3393		FGSP	First good shot point
3223	23:11	FFSP	Start of grid line
2957	23:59	Last Sp of day	End of Julian day 102
2956	00:00	First Sp of day	Sart of Julian day 103
1001	05:58	LFSP	Last full fold shot point
873	06:21	LSP	Last shot point
873	06:21	EOL	End of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FGSP	3223	08° 57' 21.038"	84° 01' 34.444"
LGSP	1001	08° 30' 21.718"	84° 14' 56.621"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 MGL11061156.p190 **P2** MGL11061156.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	good	Gun string #2	good
Tailbuoy #3	good	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

MGL11061156.LMN MGL11061156.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Complete

Seq # 003

Line Name: MGL11061012 **NAVIGATION**

Line Brg : 25.902 ° **LINE LOGS**

DATE: 2011-04-13 Lamont-Doherty Earth Observatory

JULIAN DAY: 103

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -70.9m	DEPTH SOL : 2421.3m	NAVIGATION SYSTEM USED: C-Nav3050 - Primary	
DC EOL : 67.9m	DEPTH EOL : 90.3m	NAVIGATION SYSTEM USED: SeaPath 200	
SMG SOL: 4.9 knots	FEATHER SOL: 99.0 °	NAVIGATION SYSTEM USED: C-Nav2000	
SMG EOL: 4.5 knots	FEATHER EOL: -13 °	GRAVITY METER: BMG-II: used, SN210	
WEATHER	MAX FEATHER: -14.6 °	MAGNETOMETER: GeoMetrics: used	
WIND SOL: N 19.0 knots		MAG DEC USED : 0.50°	
WIND EOL: 5 knots	00:00 – 04:00 local => DN	12:00 – 16:00 local => MM	
SEAS SOL: 1m	04:00 – 08:00 local => DN	16:00 – 20:00 local => MM	
SEAS EOL: 1m	08:00 – 12:00 local => DN	20:00 – 00:00 local => MM	

SP	TIME(UTC)	EVENT	COMMENTS
763	07:38	SOL	Start of line
1001	08:22	FFSP	First shot point
1219	09:01	Spectra	Restarted data node (DN) and navigation log node (NLN)
2682	13:25	LFSP	Last full fold shot point
2810	13:49	LGSP	Last good sp d/t repeated turtle sightings.
3347	15:32	EOL	Stop line d/t turtles.

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	1001	08° 31' 39.704"	84° 17' 37.952"
LFSP	2682	08° 52' 04.900"	84° 07' 28.943"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 MGL11061012.p190 **P2** MGL11061012.p294

Posnet locations & remarks: good - none - intermittent				Acoustic remarks:
Tailbuoy #1	good	Gun string #1	good	
Tailbuoy #2	good	Gun string #2	good	
Tailbuoy #3	good	Gun string #3	good	
Tailbuoy #4	good	Gun string #4	good	

MGL11061012.LMN MGL11061012.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Complete

Seq # 004

Line Name: MGL11061164

Line Brg : 205.9 °

NAVIGATION LINE LOGS

DATE: 2011-04-13

JULIAN DAY: 103

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

CLIENT: NSF/Bangs

SURVEY: CRISP 3D

MGL1106

DC SOL : 68.7m
DC EOL : -13.9m
SMG SOL: 4.5 knots
SMG EOL: 4.5 knots

WEATHER

WIND SOL: S 5 knots
WIND EOL: 0.0 knots
SEAS SOL: calm
SEAS EOL: 1ft

DEPTH SOL : 68.5m
DEPTH EOL : 2331.5m
FEATHER SOL: 30.1 °
FEATHER EOL: 6.5 °
MAX FEATHER: 9.4 °

00:00 – 04:00 local =>	DN	12:00 – 16:00 local =>	MM
04:00 – 08:00 local =>	DN	16:00 – 20:00 local =>	MM
08:00 – 12:00 local =>	DN	20:00 – 00:00 local =>	MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS
3339	17:17	SOL	Start of line shutdown for turtle; FSP
3223	17:39	FFSP	First full fold shot point
3130	17:56	Shutdown	turtle
3061	18:07	Ramp up	begin ramp up
2859	18:45	Ramp up	Ramp up complete
2485	19:53	power down	turtle
2479	19:56	shut down	turtle
2451	20:00	full volume	turtle
2300	20:27	power down	turtle
2268	20:33	full volume	turtle
1766	22:04	power down	turtle
1747	22:08	full volume	turtle
1140	23:59	last sp of day	julian day 103
1139	00:00	first sp of day	julian day 104
1001	00:25	LFSP	Last full fold shot point
883	00:47	LGSP	End of line
873	00:48	EOL	last nav shot

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	3223	08° 57' 17.561"	84° 01' 27.331"
LFSP	1001	08° 30' 18.078"	84° 14' 52.176"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1164.0.p190

P2 1164.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	good	Gun string #2	good
Tailbuoy #3	Intermittent	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

MGL11061164.LMN MGL11061164.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Complete

Seq # 005

Line Name: MGL11061020 **NAVIGATION**

Line Brg : 025.9 ° **LINE LOGS**

DATE: 2011-04-14 Lamont-Doherty Earth Observatory

JULIAN DAY: 104

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -88.2m	DEPTH SOL : 2488.3m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL : -84.7m	DEPTH EOL : 88.7m	NAVIGATION SYSTEM USED:	SeaPath 200
SMG SOL: 4.5 knots	FEATHER SOL: 39.5 °	NAVIGATION SYSTEM USED:	C-Nav2000
SMG EOL: 4.5 knots	FEATHER EOL: -12.5 °	GRAVITY METER:	BMG-II: used, SN210
WEATHER	MAX FEATHER: 39.5 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL: S 5 knots		MAG DEC USED :	0.50°

WIND EOL: S 5.3 knots	00:00 – 04:00 local =>	DN	12:00 – 16:00 local =>	MM
SEAS SOL: calm	04:00 – 08:00 local =>	DN	16:00 – 20:00 local =>	MM
SEAS EOL: calm	08:00 – 12:00 local =>	DN	20:00 – 00:00 local =>	MM

SP	TIME(UTC)	EVENT	COMMENTS
893	02:27	SOL	Start of line
1001	02:46	FFSP	First full fold shot point
2074	06:00	GPS	Tailbuoy 3 down
3175-3178	09:20-09:21	Shot	Spectra3 display node/binner missed 4 shots – shots show up on shotlog but not helmsman
3223	09:29	LFSP	Last full fold shot point
3283	09:39	GPS	Tailbuoy 3 intermittent
3283	09:39	GPS	Re-enable TB3
3302	09:43	GPS	KO Tb3
3351	09:52	EOL	End of nav line

VESSEL POSITION

		Latitude (N)	Longitude (E)
FFSP	1001	08° 31' 36.775"	84° 17' 31.971"
LFSP	3223	08° 58' 36.660"	84° 04' 07.755"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1020.0.p190 **P2** 1020.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	good	Gun string #2	good
Tailbuoy #3	Intermittent	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

Tailbuoy 3 down MGL11061020.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Complete

Seq # 006

Line Name: MGL11061172

Line Brg : 205.9 °

NAVIGATION LINE LOGS

DATE: 2011-04-14

JULIAN DAY: 104

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

CLIENT: NSF/Bangs | SURVEY: CRISP 3D | MGL1106

DC SOL : -53.1m
DC EOL : -23.4m
SMG SOL: 4.5 knots
SMG EOL: 4.2 knots

WEATHER

WIND SOL: N 10.5 knots
WIND EOL: SW 9 knots
SEAS SOL: calm
SEAS EOL: WNW 2-3 ft

DEPTH SOL : 66.9m
DEPTH EOL : 2313.7m
FEATHER SOL: 34.3 °
FEATHER EOL: 8.9 °
MAX FEATHER: 10 °

00:00 – 04:00 local =>	DN	12:00 – 16:00 local =>	MM
04:00 – 08:00 local =>	DN	16:00 – 20:00 local =>	MM
08:00 – 12:00 local =>	DN	20:00 – 00:00 local =>	MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS
3377	11:38	SOL	Start of line
3377	11:38	GPS	Tailbuoy 3 knocked out at start of line
3223	12:07	FFSP	First full fold shot point
2920	13:03	GPS	Tailbuoy 3 un-KO'd
2164	15:36	Shutdown	turtle
2137	15:41	Source	Source at full volume
1990	16:11	GPS	Tailbuoy 3 on and off intermittently
1001	19:23	LFSP	Last full fold shot point
883	19:46	LGSP	End of line
873	19:48	EOL	last nav shot
			Note: missed sp's 3152 to 3064 at utc times: 12:20 to 12:36

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	3223	08° 57' 13.890"	84° 01' 19.899"
LFSP	1001	08° 30' 13.569"	84° 14' 43.012"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1172.0.p190
P2 1172.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	good	Gun string #2	good
Tailbuoy #3	intermittent	Gun string #3	good
Tailbuoy #4	tilted	Gun string #4	good

Acoustic remarks:

MGL11061172.LMN MGL11061172.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: COMPLETE

Seq # 007

Line Name: MGL11061028 **NAVIGATION**

Line Brg : 025.9 ° **LINE LOGS**

DATE: 2011-04-14 Lamont-Doherty Earth Observatory

JULIAN DAY: 104

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -149.4m	DEPTH SOL : 2477.0m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL : -304.5m	DEPTH EOL : 90.9 m	NAVIGATION SYSTEM USED:	SeaPath 200
SMG SOL: 4.8 knots	FEATHER SOL: 1.6 °	NAVIGATION SYSTEM USED:	C-Nav2000
SMG EOL: 4.5 knots	FEATHER EOL: 2.6 °	GRAVITY METER:	BMG-II: used, SN210
WEATHER	MAX FEATHER: -17.7 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL: calm knots		MAG DEC USED :	0.50°

WIND EOL: calm knots	00:00 – 04:00 local =>	DN	12:00 – 16:00 local =>	MM	
SEAS SOL: 1-3 ft	04:00 – 08:00 local =>	DN	16:00 – 20:00 local =>	MM	
SEAS EOL: 1-2 ft	08:00 – 12:00 local =>	DN	20:00 – 00:00 local =>	MM	

SP	TIME(UTC)	EVENT	COMMENTS
881	22:09	FSP	Start of line
1001	22:31	FFSP	First full fold shotpoint
1492	23:59	last sp of day	
1493	00:00	first sp of day	
3219	05:11	spectra	current line 'main' display froze on spectra1
3223	05:13	LFSP	Last full fold shotpoint
3312	05:29	spectra	'unfroze'
3351	0537	LGSP	End of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	1001	08° 31' 32.067"	84° 12' 22.430"
LFSP	3223	08° 58' 35.413"	84° 04' 05.239"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1028.0.p190 **P2** 1028.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	good	Gun string #2	good
Tailbuoy #3	good	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:
center net noisy

MGL11061172.LMN MGL11061172.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: complete

Seq # 008

Line Name: MGL11061180 **NAVIGATION**

Line Brg : 205.9 ° **LINE LOGS**

DATE: 2011-04-15 Lamont-Doherty Earth Observatory

JULIAN DAY: 105

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : 126.8m
DC EOL : 47.6m
SMG SOL: 4.4 knots
SMG EOL: 3.8 knots

WEATHER
WIND SOL: NE 5.9 knots
WIND EOL: E 11.6 knots
SEAS SOL: calm
SEAS EOL: calm

DEPTH SOL : 69.0m
DEPTH EOL : 2292.7m
FEATHER SOL: 49.2 °
FEATHER EOL: 6.1 °
MAX FEATHER: 49.2 °

00:00 – 04:00 local => DN
04:00 – 08:00 local => DN
08:00 – 12:00 local => DN
12:00 – 16:00 local => MM
16:00 – 20:00 local => MM
20:00 – 00:00 local => MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS
3407	07:13	FSP	Start of line
3223	07:47	FFSP	First full fold shot point
3142	07:34	GPS	No main network solution – estimating position on main
1680	12:28	BIN	Coverage spotty around bin 920
1216	13:55	GPS	Estimate position on main
1001	14:37	LFSP	Last full fold shot point
873	15:04	LSP	End of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	3223	08° 57' 10.283"	84° 01' 12.729"
LFSP	1001	08° 30' 10.308"	84° 14' 36.544"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1180.0.p190
P2 1180.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	good	Gun string #2	good
Tailbuoy #3	good	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

MGL11061180.LMN MGL11061180.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Complete

Seq # 009

Line Name: MGL11061036 **NAVIGATION**

Line Brg : 025.9 ° **LINE LOGS**

DATE: 2011-04-15 Lamont-Doherty Earth Observatory

JULIAN DAY: 105

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -24.3m	DEPTH SOL : 2472.2m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL : 298.4m	DEPTH EOL : 86.2m	NAVIGATION SYSTEM USED:	SeaPath 200
SMG SOL: 4.5 knots	FEATHER SOL: 30.7 °	NAVIGATION SYSTEM USED:	C-Nav2000
SMG EOL: 4.4 knots	FEATHER EOL: -3.3 °	GRAVITY METER:	BMG-II: used, SN210
WEATHER	MAX FEATHER: -17.6 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL: SW 4 knots		MAG DEC USED :	0.50°
WIND EOL: NNE 4 knots	00:00 – 04:00 local => DN	12:00 – 16:00 local => MM	
SEAS SOL: NW 2 fts	04:00 – 08:00 local => DN	16:00 – 20:00 local => MM	
SEAS EOL: NW 2 fts	08:00 – 12:00 local => DN	20:00 – 00:00 local => MM	

SP	TIME(UTC)	EVENT	COMMENTS
915	20:20	FSP	Start of line
1001	20:36	FFSP	First full fold shot point
1261	21:23	spectra	ncn lock-up
1274	21:26	spectra	restarted successfully
2120	23:59	last sp of day	Julian day 105
2121	00:00	first sp of day	Julian day 106
2614	01:29	spectra	stop / start dln
2664	01:38	spectra	stop / start dln
3223	03:20	LFSP	Last full fold shotpoint
3351	03:45	LSP	End of line
			note: VID update: compass S4C16: current 13802 updated 34667
			note: VID update: compass S1C3: current 63233 updated 4430
			"May need to edit p2" in message

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	1001	08° 31' 27.792"	84° 17' 13.767"
LFSP	3223	08° 58' 30.598"	84° 03' 55.514"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1036.0.p190 **P2** 1036.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	good	Gun string #2	good
Tailbuoy #3	good	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

MGL11061036.LMN MGL11061036.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Complete

Seq # 010

Line Name: MGL11061188 **NAVIGATION**

Line Brg : 205.9 ° **LINE LOGS**

DATE: 2011-04-16 Lamont-Doherty Earth Observatory

JULIAN DAY: 106

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : 241.0m	DEPTH SOL : 67.8m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL : 24.1m	DEPTH EOL : 2415.6m	NAVIGATION SYSTEM USED:	SeaPath 200
SMG SOL: 4.52 knots	FEATHER SOL: 27.9 °	NAVIGATION SYSTEM USED:	C-Nav2000
SMG EOL: 3.8 knots	FEATHER EOL: 10.5 °	GRAVITY METER:	BMG-II: used, SN210
WEATHER	MAX FEATHER: 27.9 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL: calm knots		MAG DEC USED :	0.50°
WIND EOL: SE 7 knots	00:00 – 04:00 local => DN	12:00 – 16:00 local => MM	
SEAS SOL: 1 m	04:00 – 08:00 local => DN	16:00 – 20:00 local => MM	
SEAS EOL: 0-1	08:00 – 12:00 local => DN	20:00 – 00:00 local => MM	

SP	TIME(UTC)	EVENT	COMMENTS
3352	05:31	FSP	Start of line
3223	05:54	FFSP	First full fold shot point
1715	10:27	GPS	TB2 GPS not communicating
1712	10:28	GPS	TB2 GPS intermittent
1680	10:34	BINNER	Binner shows thin coverage ~1680-1660
1129	12:14	LFSP	Last full fold shotpoint
1001	12:38	LGSP	Last good shotpointa
988	12:42	LSP	Last shotpoint

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	3223	08° 57' 06.795"	84° 01' 05.740"
LFSP	1129	08° 31' 39.209"	84° 13' 41.395"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1188.0.p190

P2 1188.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	good	Gun string #2	good
Tailbuoy #3	good	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

MGL11061188.LMN MGL11061188.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Incomplete

Seq # 011

Line Name: MGL11061044 **NAVIGATION**

Line Brg : 25.9 ° **LINE LOGS**

DATE: 2011-04-16 Lamont-Doherty Earth Observatory

JULIAN DAY: 106

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -107.1m
DC EOL : -237.1m
SMG SOL: 5.1 knots
SMG EOL: 5.2 knots

WEATHER
WIND SOL: N 7.6 knots
WIND EOL: Calm knots
SEAS SOL: 0-1m
SEAS EOL: Flat

DEPTH SOL : 2366.0m
DEPTH EOL : 84.1m
FEATHER SOL: -11 °
FEATHER EOL: -4.7 °
MAX FEATHER: -14.9 °

00:00 – 04:00 local => DN
04:00 – 08:00 local => DN
08:00 – 12:00 local => DN
12:00 – 16:00 local => MM
16:00 – 20:00 local => MM
20:00 – 00:00 local => MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS
746	17:23	FSP	Start of line
1001	18:05	FFSP	First full fold shot point
1175	18:33	S3T2	KO'ed acoustic transducer
3025	23:32	LFSP	Last full fold shotpoint
3153	23:52	LGSP	Last good shotpoint
3196	23:59	last sp of day	
3197	00:00	first sp of day	
3351	00:24	LSP	End of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	1001	08° 31' 24.516"	84° 17' 07.208"
LFSP	3025	08° 56' 01.203"	84° 04' 56.780"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1044.0.p190
P2 1044.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

MGL11061044.LMN MGL11061044.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: INCOMPLETE

Seq # 012

Line Name: MGL11061196 **NAVIGATION**

Line Brg : 205.9 ° **LINE LOGS**

DATE: 2011-04-17 Lamont-Doherty Earth Observatory

JULIAN DAY: 107

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : 238.8m
DC EOL : 76.5m
SMG SOL: 3.1 knots
SMG EOL: 4.4 knots

WEATHER
WIND SOL: SW 5 knots
WIND EOL: SW 5 knots
SEAS SOL: 1-3m
SEAS EOL: 0-1m

DEPTH SOL : 60.8m
DEPTH EOL : 2297.6m
FEATHER SOL: 9.7 °
FEATHER EOL: 10.8 °
MAX FEATHER: 27.4 °

00:00 – 04:00 local => DN
04:00 – 08:00 local => DN
08:00 – 12:00 local => DN
12:00 – 16:00 local => MM
16:00 – 20:00 local => MM
20:00 – 00:00 local => MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS
3280	02:12	FSP	Start of line
3223	02:23	FFSP	First full fold shot point
1610	06:59	BIN	Bin not showing up on helmsman
1001	8:48	LFSP	Last full fold shotpoint
873	09:12	LGSP	Last good shotpoint
873	09:!2	LSP	Last shot point

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	3223	08° 57' 02.385"	84° 00' 56.735"
LFSP	873	08° 28' 28.682"	84° 15' 06.029"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1196.0.p190
P2 1196.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:
Acoustic S3T2 moved 150 m aft from previous line

MGL11061196.LMN MGL11061196.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Complete

Seq # 013

Line Name: MGL11061052 **NAVIGATION**

Line Brg : 25.9 ° **LINE LOGS**

DATE: 2011-04-17 Lamont-Doherty Earth Observatory

JULIAN DAY: 107

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -160.1m
DC EOL : -287.2m
SMG SOL: 5.0 knots
SMG EOL: 4.9 knots

WEATHER
WIND SOL: W 5.7 knots
WIND EOL: NW 6.7 knots
SEAS SOL: 0-1m
SEAS EOL: 0-1m

DEPTH SOL : 2432.2m
DEPTH EOL : 83.8m
FEATHER SOL: 32.4 – 16.5 when cable straight °
FEATHER EOL: -0.1 °
MAX FEATHER: 32.4 °

00:00 – 04:00 local => DN
04:00 – 08:00 local => DN
08:00 – 12:00 local => DN
12:00 – 16:00 local => MM
16:00 – 20:00 local => MM
20:00 – 00:00 local => MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS
885	10:41	FSP	Start of line
1001	11:00	FFSP	First full fold shot point
1113	11:18	SPECTRA	Estimate position main network between shots 1113 and 1114
1550	12:30	SPECTRA	Restarted main
3223		LFSP	Last full fold shotpoint
3351	17:28	LGSP	Last good shotpoint
3351	17:28	LSP	End of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	1001	08° 31' 20.684"	84° 16' 59.353"
LFSP	3223	08° 58' 22.153"	84° 03' 38.370"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1052.0.p190
P2 1052.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

MGL11061052.LMN MGL11061052.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Complete

Seq # 014

Line Name: MGL11061204 **NAVIGATION**

Line Brg : 205.9 ° **LINE LOGS**

DATE: 2011-04-17 Lamont-Doherty Earth Observatory

JULIAN DAY: 107

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : 245.8m	DEPTH SOL : 66.7m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL : 128.3m	DEPTH EOL : 2294.0m	NAVIGATION SYSTEM USED:	SeaPath 200
SMG SOL: 4.9 knots	FEATHER SOL: 28.8 °	NAVIGATION SYSTEM USED:	C-Nav2000
SMG EOL: 3.9 knots	FEATHER EOL: 11.2 °	GRAVITY METER:	BMG-II: used, SN210
WEATHER	MAX FEATHER: 15.8 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL: SW 6 knots		MAG DEC USED :	0.50°
WIND EOL: SW 5 knots	00:00 – 04:00 local => DN / 12:00 – 16:00 local => MM		
SEAS SOL: 2-3 ft	04:00 – 08:00 local => DN / 16:00 – 20:00 local => MM		
SEAS EOL: 2-4 ft	08:00 – 12:00 local => DN / 20:00 – 00:00 local => MM		

SP	TIME(UTC)	EVENT	COMMENTS
3350	18:59	FSP	Start of line
3223	19:20	FFSP	First full fold shot point
1540	23:59	Last SP of day	
1001	01:40	LFSP	Last full fold shotpoint
873	02:06	LSP	End of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	3223	08° 56' 58.766"	84° 00' 49.509"
LFSP	1001	08° 29' 58.337"	84° 14' 12.398"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1204.0.p190 P2 1204.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

MGL11061204.LMN MGL11061204.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: complete

Seq # 015

Line Name: MGL11061060 **NAVIGATION**

Line Brg : 25.9 ° **LINE LOGS**

DATE: 2011-04-18 Lamont-Doherty Earth Observatory

JULIAN DAY: 108

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -232.6m
DC EOL : -290.1m
SMG SOL: 5.1 knots
SMG EOL: 5.1 knots

WEATHER
WIND SOL: 6.5 N knots
WIND EOL: N 7.0 knots
SEAS SOL: 2-4 ft
SEAS EOL: 0-1m

DEPTH SOL : 2436.6m
DEPTH EOL : 83.5m
FEATHER SOL: 55.3 °
FEATHER EOL: -1.8 °
MAX FEATHER: 55.3 °

00:00 – 04:00 local => DN
04:00 – 08:00 local => DN
08:00 – 12:00 local => DN
12:00 – 16:00 local => MM
16:00 – 20:00 local => MM
20:00 – 00:00 local => MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS
890	03:41	FSP	Start of line
1001	04:00	FFSP	First full fold shot point
1755	06:04	Spectra	Restarted spectra main
2860		BINNER	Shots missing in binner
3223	10:02	LFSP	Last full fold shotpoint
3351	10:23	LSP	End of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	1001	08° 31' 18.260"	84° 16' 54.417"
LFSP	3223	08° 58' 17.894"	84° 03' 29.708"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1060.0.p190
P2 1060.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

MGL11061060.LMN MGL11061060.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Complete

Seq # 016

Line Name: MGL11061212 **NAVIGATION**

Line Brg : 205.9 ° **LINE LOGS**

DATE: 2011-04-18 Lamont-Doherty Earth Observatory

JULIAN DAY: 108

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : 258.3m
DC EOL : 285.5m
SMG SOL: 4.7 knots
SMG EOL: 4.0 knots
WEATHER
WIND SOL: N 4.4 knots
WIND EOL: SW 7.4 knots
SEAS SOL: 0-1m
SEAS EOL: 0-1m

DEPTH SOL : 62.8m
DEPTH EOL : 2295.5m
FEATHER SOL: 62.8 °
FEATHER EOL: -1.2 °
MAX FEATHER:

00:00 – 04:00 local => DN
04:00 – 08:00 local => DN
08:00 – 12:00 local => DN
12:00 – 16:00 local => MM
16:00 – 20:00 local => MM
20:00 – 00:00 local => MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS
3338	11:58	FSP	Start of line – NOT full power
3251	12:14	FGSP	First good shot point w/ full volume
3223	12:19	FFSP	First full fold shot point
3062	12:45	MMO	Power down for turtle
3023	12:52	MMO	Resume shooting at full volume
2915	13:10	MMO	Power down for dolphin and turtle
2749	13:42	MMO	Shutdown for turtle
2473	14:28	MMO	Ramp up Complete
2438	14:34	MMO	Power down for turtle
2345	14:49	MMO	Power down for turtle
2339	14:50	MMO	Shutdown for turtle
2308	14:56	MMO	Shutdown for turtle
2167	15:21	MMO	Power down for turtle
2021	15:47	MMO	Ramp up Complete Full Power 3300 cu in
1632	16:55	MMO	Power down for turtle 3.5 minutes
	16:58	MMO	Shutdown for turtle
1524	17:15	MMO	Power down for turtle
1448	17:28	MMO	Power down for turtle
	17:41	MMO	Ramp up Complete
1309	17:53	MMO	Power down for turtle
1288	17:56	MMO	Resume shooting at full volume
1247	18:04	Spectra	Disable line = firing of source stopped
1246	18:04	Spectra	Enable line
1217	18:10	Spectra	Disable / Enable line = source firing normal
1193	18:14	MMO	Power down for turtle
1174	18:17	MMO	Resume shooting at full volume
1167	18:19	MMO	Power down for turtle
1152	18:22	MMO	Resume shooting at full volume
1001	18:51	LFSP	Last full fold shotpoint
873	19:17	LSP	End of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	3223	08° 56' 54.222"	84° 00' 40.169"
LFSP	1001	08° 29' 56.314"	84° 14' 08.160"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1212.0.p190
P2 1212.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

MGL11061212.LMN MGL11061212.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Incomplete

Seq # 017

Line Name: MGL11061044I **NAVIGATION**

Line Brg : 025.9 ° **LINE LOGS**

DATE: 2011-04-18 Lamont-Doherty Earth Observatory

JULIAN DAY: 108

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -18.1m	DEPTH SOL : 2457.1m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL : -140.2m	DEPTH EOL : 2530.8m	NAVIGATION SYSTEM USED:	SeaPath 200
SMG SOL: 4.6 knots	FEATHER SOL: 40.4 °	NAVIGATION SYSTEM USED:	C-Nav2000
SMG EOL: 1.2 knots	FEATHER EOL: 24.2 °	GRAVITY METER:	BMG-II: used, SN210
WEATHER	MAX FEATHER: 40.4 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL: 2.3 knots		MAG DEC USED :	0.50°

WIND EOL: 3 knots	00:00 – 04:00 local =>	DN	12:00 – 16:00 local =>	MM	
SEAS SOL: 0-1m	04:00 – 08:00 local =>	DN	16:00 – 20:00 local =>	MM	
SEAS EOL: 0-1m	08:00 – 12:00 local =>	DN	20:00 – 00:00 local =>	MM	

SP	TIME(UTC)	EVENT	COMMENTS
912	20:57	FSP	Start of Infill line
		FFSP	First full fold shot point
961	21:12	LSP	End of infill line
1001	18:51	LFSP	Last full fold shotpoint of Infill line
873	19:17	LSP	End of line

VESSEL POSITION

	Latitude (N)	Longitude (W)
FFSP		
LFSP		

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1	P2
1044I.0.p190	1044I.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

MGL11061044I.LM MGL11061044I.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Incomplete

Seq # 018

Line Name: MGL11061044J **Line Brg :** 25.9 °

NAVIGATION LINE LOGS

DATE: 2011-04-19 **JULIAN DAY:** 109

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : 82.7m
DC EOL : -300.1m
SMG SOL: 5.0 knots
SMG EOL: 5.0 knots
WEATHER
WIND SOL: 8.6 knots
WIND EOL: 1.2 knots
SEAS SOL: 0-1m
SEAS EOL: 0-1m

DEPTH SOL : 2372.9m
DEPTH EOL : 87.0m
FEATHER SOL: -4.5 °
FEATHER EOL: 0.8 °
MAX FEATHER: 7.1 °

00:00 – 04:00 local => DN
04:00 – 08:00 local => DN
08:00 – 12:00 local => DN
12:00 – 16:00 local => MM
16:00 – 20:00 local => MM
20:00 – 00:00 local => MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS
780	14:51	FSP	Start of line
1001	15:27	FISP	First infill shotpoint
1031	15:32	MMO	Power down for turtle
1060	15:37	MMO	Power up
1083	15:41	MMO	Power down for plastic bag
1093	15:43	MMO	Last good shotpoint
2118	18:30	MMO	Power down for turtle
2150	18:35	MMO	Power up
2343	19:06	MMO	Power down for turtle
2374	19:11	MMO	Power up
2408	19:17	MMO	Power down for turtle
2441	19:22	MMO	Power up
2683	20:01	Infill	Last infill shotpoint
2684	20:01	Reshoot	First reshoot shotpoint
2731	20:09	Reshoot	Last reshoot shotpoint
2732	20:09	Infill	First infill shotpoint
2786	20:18	Infill	Last infill shotpoint
2787	20:18	Reshoot	First reshoot shotpoint
2829	20:25	Reshoot	Last reshoot shotpoint
2830	20:25	Infill	First infill shotpoint
2991	20:51	Infill	Last infill shotpoint
2992	20:51	Reshoot	First reshoot shotpoint
3030	20:57	Reshoot	Last reshoot shotpoint
3031	20:58	Infill	First infill shotpoint
3152	21:17	Infill	Last infill shotpoint
3153	21:18	Reshoot	First reshoot shotpoint
3351	21:58	Reshoot/EOL	Last reshoot shotpoint / end of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	1001	08° 31' 21.970"	84° 17' 02.003"
LFSP	3223	08° 58' 26.328"	84° 03' 46.881"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1044J.0.p190 **P2** 1044J.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

MGL11061044J.LN MGL11061044J.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: COMPLETE

Seq # 019

Line Name: MGL11061068 **NAVIGATION**

Line Brg : 25.9 ° **LINE LOGS**

DATE: 2011-04-20 Lamont-Doherty Earth Observatory

JULIAN DAY: 110

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -354.8m	DEPTH SOL : 2415.8m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL : -427.6m	DEPTH EOL : 80.3m	NAVIGATION SYSTEM USED:	SeaPath 200
SMG SOL: 5.0 knots	FEATHER SOL: 46.8 °	NAVIGATION SYSTEM USED:	C-Nav2000
SMG EOL: 3.7 knots	FEATHER EOL: 9.5 °	GRAVITY METER:	BMG-II: used, SN210
WEATHER	MAX FEATHER: 46.8 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL: NW 11.6 knots		MAG DEC USED :	0.50°
WIND EOL: E 0.4 knots	00:00 – 04:00 local => DN	12:00 – 16:00 local => MM	
SEAS SOL: 0-1m	04:00 – 08:00 local => DN	16:00 – 20:00 local => MM	
SEAS EOL: 0-1m	08:00 – 12:00 local => DN	20:00 – 00:00 local => MM	

SP	TIME(UTC)	EVENT	COMMENTS
853	09:49	FSP	Start of line
1001	10:13:31	FFSP	First good shot point
1028	10:17	Spectra	Restart main, dn
1693 – 1665	12:00-12:04	Spectra	Spectra DLN restart, new files MGL11061068.1.p190, p290
2244	13:35	Spectra	Estimate position on ncc between 2244 and 2245
2304	13:44	Spectra	Restarted main
2337	13:50	Acoustic	Acoustic on streamer 2 tailbuoy bad
2417	14:03	Spectra	Estimate position on main
2421	14:04	Spectra	Estimate position on main
2448	14:08	Spectra	Restarted main dn
2505	14:18	MMO	Power Down for turtle
2542	14:24	MMO	Full power
2665	14:45	MMO	Power Down for turtle
2686	1449	MMO	Full power
2735	14:57	Spectra	Restarted main dn
2867	15:20	Vessel	Vessel power loss
2867	15:20	LGSP	Last good shot point
2955	15:39	MMO	Power Down for turtle
3091	16:06	MMO	Full power
3105	16:09	Compressor	Compressors down – firing one gun S4G3
3223	16:33	LFSP	Last full fold shot point – not full volume
3351	17:01	EOL	End of line – not full volume

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	1001	08° 31' 14.861"	84° 16' 47.636"
LFSP	3223	08° 58' 15.433"	84° 03' 24.845"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1068.0.p190 **P2** 1068.0.p294

MGL11061068.LMN MGL11061068.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Incomplete

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

Seq # 020

Line Name: MGL11061212R

Line Brg : 205.9 °

NAVIGATION LINE LOGS

DATE: 2011-04-20

JULIAN DAY: 110

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

CLIENT: NSF/Bangs | **SURVEY: CRISP 3D** | **MGL1106**

DC SOL : 288.2m
DC EOL : 267.6m
SMG SOL: 4.4 knots
SMG EOL: 4.7 knots

WEATHER

WIND SOL: SW 14.0 knots
WIND EOL: SW 13 knots
SEAS SOL: 2-3ft
SEAS EOL: 2-3 ft

DEPTH SOL : 140.5m
DEPTH EOL : 2291.2m
FEATHER SOL: -10.2 °
FEATHER EOL: 1 °
MAX FEATHER: 8.8 °

00:00 – 04:00 local =>	DN	12:00 – 16:00 local =>	MM
04:00 – 08:00 local =>	DN	16:00 – 20:00 local =>	MM
08:00 – 12:00 local =>	DN	20:00 – 00:00 local =>	MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS
2721	20:37	FSP	Start of line
2572	21:04	FGDP/FFSP	First good shot point/FIrst Full Fold shop point – after compressor repair – First reshoot shotpoint of line
2474	21:22	reshoot	last reshoot shotpoint
2473	21:22	infill	first infill shotpoint
2438	21:29	infill	last infill shotpoint
2437	21:29	reshoot	first reshoot shotpoint
2022	22:45	reshoot	last reshoot shotpoint
2021	22:45	infill	first infill shotpoint
1831	23:20	TB2	knock out – lost signal
1633	23:56	infill	last infill shotpoint
1632	23:57	reshoot	first reshoot shotpoint
1616	23:59	midnight SP	last shotpoint of the day
1366	00:43	reshoot	last reshoot shotpoint
1365	00:43	infill	first infill shotpoint
1308	00:53	infill	last infill shotpoint
1307	00:53	reshoot	first reshoot shotpoint
1289	00:56	reshoot	last reshoot shotpoint
1288	00:57	infill	first infill shotpoint
1272	00:59	infill	last infill shotpoint
1271	00:59	reshoot	first reshoot shotpoint
1215	01:09	reshoot	last reshoot shotpoint
1214	01:09	infill	first infill shotpoint
1194	01:13	infill	last infill shotpoint
1193	01:13	reshoot	first reshoot shotpoint
1175	01:16	reshoot	last reshoot shotpoint
1174	01:16	infill	first infill shotpoint
1167	01:18	infill	last infill shotpoint
1166	01:18	reshoot	first reshoot shotpoint
1153	01:20	reshoot	last reshoot shotpoint
1152	01:20	infill	first infill shotpoint
1001	01:46	LFSP	Last full fold shot point – not full volume
873	02:08	EOL	End of infill line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	2572	08° 49' 00.590"	84° 04' 37.666"
LFSP	1001	08° 29' 56.068"	84° 14' 07.675"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1	P2
1212R.0.p190	1212R.0.p294

MGL11061212R.LM MGL11061212R.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: incomplete

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	intermittent	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

Seq # 021

Line Name: MGL11061068I

Line Brg : 25.9 °

NAVIGATION LINE LOGS

DATE: 2011-04-21

JULIAN DAY: 111

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

CLIENT: NSF/Bangs

SURVEY: CRISP 3D

MGL1106

DC SOL : -110.4m
DC EOL : -111.5m
SMG SOL: 4.7 knots
SMG EOL: 4.4 knots

WEATHER

WIND SOL: SW 11 knots
WIND EOL: NE 4.2 knots
SEAS SOL: 4ft
SEAS EOL: 0-1m

DEPTH SOL : 2386.9m
DEPTH EOL : 85.1m
FEATHER SOL: 53.7 °
FEATHER EOL: 4.1 °
MAX FEATHER: 53.7 °

00:00 – 04:00 local =>	DN	12:00 – 16:00 local =>	MM
04:00 – 08:00 local =>	DN	16:00 – 20:00 local =>	MM
08:00 – 12:00 local =>	DN	20:00 – 00:00 local =>	MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS
823	03:30	SOL	start of line
1001	04:01	FFSP	first fullfold shot point
2996	09:54	Spectra	Restart spectra dln
3144	10:20	Spectra	BIN not updating
3223	10:34	LFSP	Last full fold shot point
3351	10:57	EOL/LSP	Last shot point

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	1001	08° 31' 10.329"	84° 16' 38.443"
LFSP	3223	08° 58' 11.144"	84° 03' 16.131"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1068I.0.p190

P2 1068I.0.p294

MGL11061068I.LM MGL11061068I.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Complete

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

Seq # 022

Line Name: MGL11061220 **NAVIGATION**

Line Brg : 205.9 ° **LINE LOGS**

DATE: 2011-04-21 Lamont-Doherty Earth Observatory

JULIAN DAY: 111

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : 247.4m
DC EOL : 261.6m
SMG SOL: 5.4 knots
SMG EOL: 5.0 knots
WEATHER
WIND SOL: N 9.1 knots
WIND EOL: SW 10.9 knots
SEAS SOL: 0-1m
SEAS EOL: 1m

DEPTH SOL : 64.9m
DEPTH EOL : 2302.3m
FEATHER SOL: 53.8 °
FEATHER EOL: 1.7 °
MAX FEATHER: 5.0 °

00:00 – 04:00 local => DN
04:00 – 08:00 local => DN
08:00 – 12:00 local => DN
12:00 – 16:00 local => MM
16:00 – 20:00 local => MM
20:00 – 00:00 local => MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS
3378	12:27	SOL	start of line
3223	12:53	FFSP	first fullfold shot point
2990	13:30	MMO	Power Down for Dolphin
2944	13:38	MMO	Shut Down for Dolphin
2715	14:14	MMO	Complete Ramp ud
2396-2382	15:06-15:09	Spectra	Spectra main network locked up and resolved
2134	15:49	Spectra	Spectra trouble with bining / feather
1001	18:54	LFSP	Last full fold shot point
916-910	19:08-19:09	Spectra	No data logging node
873	19:15	EOL/LSP	Last shot point

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	3223	08° 56' 49.776"	84° 00' 34.049"
LFSP	1001	08° 29' 51.770"	84° 13' 58.888"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1220.0.p190
P2 1220.0.p294

MGL11061220.LMN MGL11061220.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: COMPLETE

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

Seq # 023

Line Name: MGL11061076 **NAVIGATION**

Line Brg : 025.9 ° **LINE LOGS**

DATE: 2011-04-21 Lamont-Doherty Earth Observatory

JULIAN DAY: 111

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -108.4m	DEPTH SOL : 2364.0m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL : -194.2m	DEPTH EOL : 79.4m	NAVIGATION SYSTEM USED:	SeaPath 200
SMG SOL: 4.2 knots	FEATHER SOL: 41.5 °	NAVIGATION SYSTEM USED:	C-Nav2000
SMG EOL: 4.4 knots	FEATHER EOL: 7 °	GRAVITY METER:	BMG-II: used, SN210
WEATHER	MAX FEATHER: 7 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL: SE 2 knots		MAG DEC USED :	0.50°

WIND EOL: N 5 knots	00:00 – 04:00 local =>	DN	12:00 – 16:00 local =>	MM	
SEAS SOL: 2-3 ft	04:00 – 08:00 local =>	DN	16:00 – 20:00 local =>	MM	
SEAS EOL: 1 ft	08:00 – 12:00 local =>	DN	20:00 – 00:00 local =>	MM	

SP	TIME(UTC)	EVENT	*COMMENTS*
824	20:43	SOL	start of line
1001	21:17	FFSP	First full fold shotpoint
1903	23:59	midnight SP	last shot of day
2106-2109	00:37-00:38	spectra	data logging node
3223	04:08	LFSP	last fullfold shot point
3351	04:31	EOL	last shot point

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	1001	08° 31' 07.396"	84° 16' 32.328"
LFSP	3223	08° 58' 07.726"	84° 03' 09.040"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1076.0.p190 **P2** 1076.0.p294

MGL11061076.LMN MGL11061076.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: complete

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

Seq # 024

Line Name: MGL11061220I **NAVIGATION**

Line Brg : 205.6 ° **LINE LOGS**

DATE: 2011-04-22 Lamont-Doherty Earth Observatory

JULIAN DAY: 112

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -62.4m	DEPTH SOL : 60.4m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL : 76.4m	DEPTH EOL : 2312.7m	NAVIGATION SYSTEM USED:	SeaPath 200
SMG SOL: 5.3 knots	FEATHER SOL: 59.3 °	NAVIGATION SYSTEM USED:	C-Nav2000
SMG EOL: 5.8 knots	FEATHER EOL: -0.6 °	GRAVITY METER:	BMG-II: used, SN210
WEATHER	MAX FEATHER: 59.3 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL: 5.1NW knots		MAG DEC USED :	0.50°
WIND EOL: W 10.3 knots	00:00 – 04:00 local => DN	12:00 – 16:00 local => MM	
SEAS SOL: 1m	04:00 – 08:00 local => DN	16:00 – 20:00 local => MM	
SEAS EOL: 1m	08:00 – 12:00 local => DN	20:00 – 00:00 local => MM	

SP	TIME(UTC)	EVENT	COMMENTS
3399	5:54	SOL	start of line
3223		FFSP	First full fold shotpoint
3274-3177	6:14 – 6:31	Spectra	No Shotlog data
2960	7:09	Spectra	Spectra main restarted
2960	7:12	Spectra	Spectra main and ncc restarted
2910	7:15	Spectra	Main network back
1001	12:24	LFSP	Last full fold shot point
873	12:45	EOL	End of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	3223		
LFSP	1001	08° 29' 49.264"	84° 13' 53.815"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1220I.0.p190 **P2** 1220I.0.p294

MGL11061220I.LM MGL11061220I.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Complete

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

Seq # 025

Line Name: MGL11061084 **NAVIGATION**

Line Brg : 25.9 ° **LINE LOGS**

DATE: 2011-04-22 Lamont-Doherty Earth Observatory

JULIAN DAY: 112

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -204.8m	DEPTH SOL : 2402.8m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL : -201.1m	DEPTH EOL : 80.3m	NAVIGATION SYSTEM USED:	SeaPath 200
SMG SOL: 4.6 knots	FEATHER SOL: 38.5 °	NAVIGATION SYSTEM USED:	C-Nav2000
SMG EOL: 4.3 knots	FEATHER EOL: 7.2 °	GRAVITY METER:	BMG-II: used, SN210
WEATHER	MAX FEATHER: 7.4 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL: NE 9.3 knots		MAG DEC USED :	0.50°

WIND EOL: S 5 knots	00:00 – 04:00 local =>	DN	12:00 – 16:00 local =>	MM	
SEAS SOL: 0-1m	04:00 – 08:00 local =>	DN	16:00 – 20:00 local =>	MM	
SEAS EOL: 1m	08:00 – 12:00 local =>	DN	20:00 – 00:00 local =>	MM	

SP	TIME(UTC)	EVENT	COMMENTS
845	14:10	SOL	start of line
1001	14:39	FFSP	First full fold shotpoint
1496	16:10	Spectra	Restarated spectra main ncn
3223		LFSP	Last full fold shot point
3351	22:09	EOL	End of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	1001	08° 31' 03.445"	84° 16' 24.436"
LFSP	3223		

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1084.0.p190 **P2** 1084.0.p294

MGL11061084.LMN MGL11061084.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: complete

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

Seq # 026

Line Name: MGL11061228

Line Brg : 205.9 °

NAVIGATION

LINE LOGS

DATE: 2011-04-22

JULIAN DAY: 112

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

CLIENT: NSF/Bangs

SURVEY: CRISP 3D

MGL1106

DC SOL : -81.9m
DC EOL : 92.9m
SMG SOL: 5.0 knots
SMG EOL: 5.0 knots

WEATHER

WIND SOL: S 5 knots
WIND EOL: NE 6.5 knots
SEAS SOL: 1m
SEAS EOL: 1m

DEPTH SOL : 62.6m
DEPTH EOL : 2313.2m
FEATHER SOL: 55.9 °
FEATHER EOL: 3.5 °
MAX FEATHER: 58.3 °

00:00 – 04:00 local =>	DN	12:00 – 16:00 local =>	MM
04:00 – 08:00 local =>	DN	16:00 – 20:00 local =>	MM
08:00 – 12:00 local =>	DN	20:00 – 00:00 local =>	MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS
3389	23:39	SOL	start of line
3259	23:59	midnight sp	Last sp of day
3223	00:05	FFSP	First full fold shotpoint
1001	06:05	LFSP	Last full fold shot point
873	06:26	EOL	End of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	3223	08° 56' 42.410"	84° 00' 16.101"
LFSP	1001	08° 29' 45.003"	84° 13' 45.087"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1228.1.p190

P2 1228.1.p294

MGL11061228.LMN MGL11061228.SCN(001) Langseth.RTCN

SP spacing: 25m

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

line status: complete

Seq # 027

Line Name: MGL11061092 **NAVIGATION**

Line Brg : 25.9 ° **LINE LOGS**

DATE: 2011-04-23 Lamont-Doherty Earth Observatory

JULIAN DAY: 113

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -217.5m
DC EOL : -247.3m
SMG SOL: 3.9 knots
SMG EOL: 3.9 knots
WEATHER
WIND SOL: N 2.9 knots
WIND EOL: E 4.8 knots
SEAS SOL: 0-1m
SEAS EOL: 0-1m

DEPTH SOL : 2368.7m
DEPTH EOL : 79.1m
FEATHER SOL: 34.9 °
FEATHER EOL: 9.1 °
MAX FEATHER: 34.9 °

00:00 – 04:00 local =>	DN	12:00 – 16:00 local =>	MM
04:00 – 08:00 local =>	DN	16:00 – 20:00 local =>	MM
08:00 – 12:00 local =>	DN	20:00 – 00:00 local =>	MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS
828	07:55	SOL	start of line
1001	08:31	FFSP	First full fold shotpoint
1005-1034	08:32-08:38	Spectra	Restart NCC and Main; P2 are not logged
2503	13:22	Spectra	Restart QC_V1G2 ncn
2570	13:36	Spectra	Restart main
2643	13:51	MMO	Power down for turtle
2667	1356	MMO	Full power
2948-2962	14:53-14:56	Spectra	Restart spectra main – missing shots in shotlog
3070-3077	15:17-15:19	Spectra	Restart spectra main – missing shots in shotlog
3223	15:48	LFSP	Last full fold shot point
3351	16:14	EOL	End of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	1001	08° 30' 59.678"	84° 16' 16.559"
LFSP	3223	08° 57' 59.985"	84° 02' 53.244"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1092.0.p190 **P2** 1092.0.p294

MGL11061092.LMN MGL11061092.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Complete

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

Seq # 028

Line Name: MGL11061236 **NAVIGATION**

Line Brg : 205.9 ° **LINE LOGS**

DATE: 2011-04-23 Lamont-Doherty Earth Observatory

JULIAN DAY: 113

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -116.1m
DC EOL : 157.4m
SMG SOL: 5.1 knots
SMG EOL: 4.9 knots

WEATHER

WIND SOL: NW 6.5 knots
WIND EOL: S 6 knots
SEAS SOL: 0-1m
SEAS EOL: 0-1m

DEPTH SOL : 60.9m
DEPTH EOL : 2298.3m
FEATHER SOL: 72.3 °
FEATHER EOL: 0.2 °
MAX FEATHER: -10.2 °

00:00 – 04:00 local =>	DN	12:00 – 16:00 local =>	MM
04:00 – 08:00 local =>	DN	16:00 – 20:00 local =>	MM
08:00 – 12:00 local =>	DN	20:00 – 00:00 local =>	MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS
3530	17:39	SOL	start of line
3351	18:09	FFSP	First full fold shotpoint
3229-3224	18:29	Spectra	Data logging node not logging
1195	23:59	midnight SP	last shot of the day
1129	00:10	LFSP	Last full fold shot point
1001	00:31	EOL	End of line

NOTE: Line Control page has 'line start sp of 3351 and not 3223" - Processing will take care of the descrepancy -

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	3351	08° 56' 38.223"	84° 00' 07.561"
LFSP	1129	08° 29' 41.539"	84° 13' 38.021"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1	P2
1236.0.p190	1236.0.p294
1236.1.p190	1236.1.p294
1236.2.p190	1236.2.p294

MGL11061236.LMN MGL11061236.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: complete

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

Seq # 029

Line Name: MGL11061100 **Line Brg :** 26 °

NAVIGATION LINE LOGS

DATE: 2011-04-24 **JULIAN DAY:** 114

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -260.0m
DC EOL : -271.1m
SMG SOL: 3.9 knots
SMG EOL: 3.9 knots

WEATHER
WIND SOL: variable knots
WIND EOL: NW 6.9 knots
SEAS SOL: <1m
SEAS EOL: 0-1m

DEPTH SOL : 2391.4m
DEPTH EOL : 79.4m
FEATHER SOL: 23.1 °
FEATHER EOL: 9.1 °
MAX FEATHER: 23.1 °

00:00 – 04:00 local => DN 12:00 – 16:00 local => MM
04:00 – 08:00 local => DN 16:00 – 20:00 local => MM
08:00 – 12:00 local => DN 20:00 – 00:00 local => MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS
832-861	1:56-02:02	Spectra	Spectra 1 not functioning properly
862	02:02	SOL	start of line
1001	02:31	FFSP	First full fold shotpoint
1461-1488	04:07-04:13	Spectra	NCC not functioning for this sp range, no data logged
3223		LFSP	Last full fold shot point
3351	10:55	EOL	End of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	1001	08° 30' 55.502"	84° 16' 08.242"
LFSP	3223		

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1	P2
1100.0.p190	1100.0.p294
1100.5.p190	1100.5.p294

MGL11061100.LMN MGL11061100.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Complete

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

Seq # 030

Line Name: MGL11061244 **NAVIGATION**

Line Brg : 205.9 ° **LINE LOGS**

DATE: 2011-04-24 Lamont-Doherty Earth Observatory

JULIAN DAY: 114

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -174.3m
DC EOL : 134.0m
SMG SOL: 4.8 knots
SMG EOL: 5.1 knots

WEATHER
WIND SOL: NE 4.4 knots
WIND EOL: NE6.5 knots
SEAS SOL: 0-1m
SEAS EOL: 0-1m

DEPTH SOL : 60.2m
DEPTH EOL : 2301.5 m
FEATHER SOL: 37.5 °
FEATHER EOL: 4.4 °
MAX FEATHER: -15.4 °

00:00 – 04:00 local =>	DN	12:00 – 16:00 local =>	MM
04:00 – 08:00 local =>	DN	16:00 – 20:00 local =>	MM
08:00 – 12:00 local =>	DN	20:00 – 00:00 local =>	MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS
3355	12:36	SOL	start of line
3260	12:52	Spectra	P2 stopped logging; restarted spectra main and ncc dln and dn
3223	12:58	FFSP	First full fold shotpoint
3132	13:13	MMO	Shut down for turtle
3089	13:20	MMO	Back at full volume/single source – secured other half to disentangle sea bird
3074	13:22	Spectra	Restart spectra main
1522	17:36	MMO	Power down for turtle
1591	17:39	MMO	Full power
1001	19:00	LFSP	Last full fold shot point
873	19:21	EOL	End of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	3223	08° 56' 34.179"	83° 59' 59.307"
LFSP	1001	08° 29' 36.911"	84° 13' 28.564"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1244.0.p190
P2 1244.0.p294

MGL11061244LMN MGL11061244.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: COMPLETE

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

Seq # 031

Line Name: MGL11061108

Line Brg : 25.9 °

NAVIGATION LINE LOGS

DATE: 2011-04-24

JULIAN DAY: 114

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

CLIENT: NSF/Bangs

SURVEY: CRISP 3D

MGL1106

DC SOL : -259.0m
DC EOL : -169.6m
SMG SOL: 3.6 knots
SMG EOL: 3.4 knots

WEATHER

WIND SOL: NW 6.1 knots
WIND EOL: NE 6.9 knots
SEAS SOL: 1m
SEAS EOL: 1m

DEPTH SOL : 2394.1m
DEPTH EOL : 2247.4m
FEATHER SOL: 28.5 °
FEATHER EOL: -7.1 °
MAX FEATHER: 28.5 °

00:00 – 04:00 local =>	DN	12:00 – 16:00 local =>	MM
04:00 – 08:00 local =>	DN	16:00 – 20:00 local =>	MM
08:00 – 12:00 local =>	DN	20:00 – 00:00 local =>	MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS
836	20:52	SOL	start of line
1001	21:32	FFSP	First full fold shotpoint
1225-1229	22:24-22:25	Spectra	Restart main and NCC
1238	22:27	LGSP	streamer one power issues
1302	22:42	EOL	Stop line for streamer1 problem
1110	21:58	LFSP	Last full fold shot point

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	1001	08° 30' 51.104"	84° 15' 59.196"
LFSP	1110	08° 32' 10.477"	84° 15' 19.593"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1108.0.p190

P2 1108.0.p294

MGL11061108LMN MGL11061108.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Incomplete

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

Seq # 032

Line Name: MGL11061108R

Line Brg : 25.9 °

NAVIGATION

LINE LOGS

DATE: 2011-04-25

JULIAN DAY: 115

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY EARTH INSTITUTE

CLIENT: NSF/Bangs

SURVEY: CRISP 3D

MGL1106

DC SOL : -218.2m
DC EOL : -295.7m
SMG SOL: 3.3 knots
SMG EOL: 3.6 knots

WEATHER

WIND SOL: calm knots
WIND EOL: calm knots
SEAS SOL: <1m
SEAS EOL: <1m

DEPTH SOL : 1034.7m
DEPTH EOL : 78.9m
FEATHER SOL: 1.0 °
FEATHER EOL: 10 °
MAX FEATHER: 10 °

00:00 – 04:00 local =>	DN	12:00 – 16:00 local =>	MM
04:00 – 08:00 local =>	DN	16:00 – 20:00 local =>	MM
08:00 – 12:00 local =>	DN	20:00 – 00:00 local =>	MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS
1749	23:50	SOL	start of line
1877	00:22	FFSP	First full fold shotpoint
2505-2530	02:37-02:43	spectra	Data logging P1 not recording
1788	23:59	midnight SP	last shot of the day
3223	05:14	LFSP	Last full fold shot point
3351	05:41	EOL	

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	1877	08° 41' 29.744"	84° 10' 42.235"
LFSP	3223	08° 57' 51.963"	84° 02' 37.061"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1108R.0.p190

P2 1108R.0.p294

MGL11061108RLM MGL11061108R.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: incomplete

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

Seq # 033

Line Name: MGL11061252 **NAVIGATION**

Line Brg : 205.9 ° **LINE LOGS**

DATE: 2011-04-26 Lamont-Doherty Earth Observatory

JULIAN DAY: 116

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -22.3m	DEPTH SOL : 60.3m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL : 244.6m	DEPTH EOL : 2304.0m	NAVIGATION SYSTEM USED:	SeaPath 200
SMG SOL: 5.6 knots	FEATHER SOL: 74.8 °	NAVIGATION SYSTEM USED:	C-Nav2000
SMG EOL: 4.9 knots	FEATHER EOL: 0.0 °	GRAVITY METER:	BMG-II: used, SN210
WEATHER	MAX FEATHER: 74.8 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL: NW 3.6 knots		MAG DEC USED :	0.50°
WIND EOL: N 7.2 knots	00:00 – 04:00 local => DN	12:00 – 16:00 local => MM	
SEAS SOL: 0-1m	04:00 – 08:00 local => DN	16:00 – 20:00 local => MM	
SEAS EOL: 0-1m	08:00 – 12:00 local => DN	20:00 – 00:00 local => MM	

SP	TIME(UTC)	EVENT	COMMENTS
3398	07:12	SOL	start of line
3223	07:40	FFSP	First full fold shotpoint
1246-1245	12:56-12:57	Source	Change of volume on stbd side 3300 to 3220
1001	13:35	LFSP	Last full fold shot point
873	13:56	EOL	end of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	3223	08° 56' 29.874"	83° 59' 50.542"
LFSP	1001	08° 29' 34.258"	84° 13' 23.123"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1252.0.p190 **P2** 1252.0.p294

MGL11061252LMN MGL11061252.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Complete

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

Seq # 034

Line Name: MGL11061116 **NAVIGATION**

Line Brg : 25.9 ° **LINE LOGS**

DATE: 2011-04-26 Lamont-Doherty Earth Observatory

JULIAN DAY: 116

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -299.4m	DEPTH SOL : 2394.6m	NAVIGATION SYSTEM USED: C-Nav3050 - Primary	
DC EOL : -300.3m	DEPTH EOL : 75.0m	NAVIGATION SYSTEM USED: SeaPath 200	
SMG SOL: 3.7 knots	FEATHER SOL: 39.9 °	NAVIGATION SYSTEM USED: C-Nav2000	
SMG EOL: 4 knots	FEATHER EOL: 9.1 °	GRAVITY METER: BMG-II: used, SN210	
WEATHER	MAX FEATHER: 9.1 °	MAGNETOMETER: GeoMetrics: used	
WIND SOL: SW 0 knots		MAG DEC USED : 0.50°	
WIND EOL: NW 9 knots	00:00 – 04:00 local => DN	12:00 – 16:00 local => MM	
SEAS SOL: 0-1m	04:00 – 08:00 local => DN	16:00 – 20:00 local => MM	
SEAS EOL: 0-1m	08:00 – 12:00 local => DN	20:00 – 00:00 local => MM	

SP	TIME(UTC)	EVENT	COMMENTS
821	15:33	SOL	start of line
1001	16:11	FFSP	First full fold shotpoint
1351-1357	17:26-17:27	Spectra	Restart main
1733-1734	18:47	Spectra	DLN for two shots
2230-2231	20:33	Spectra	DLN for two shots
3186	23:59	midnight SP	last shot of the day
3223	00:07	LFSP	Last full fold shot point
3351	00:33	EOL	end of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	1001	08° 30' 48.460"	84° 14' 53.826"
LFSP	3223	08° 57' 47.782"	84° 02' 28.570"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1116.0.p190 P2 1116.0.p294

MGL11061116.LMN MGL11061116.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: complete

Posnet locations & remarks: good - none - intermittent				Acoustic remarks:
Tailbuoy #1	good	Gun string #1	good	
Tailbuoy #2	intermittent	Gun string #2	good	
Tailbuoy #3	bad	Gun string #3	good	
Tailbuoy #4	good	Gun string #4	good	

Seq # 035

Line Name: MGL11061260 **NAVIGATION**

Line Brg : 205.9 ° **LINE LOGS**

DATE: 2011-04-27 Lamont-Doherty Earth Observatory

JULIAN DAY: 117

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -4.7m	DEPTH SOL : 59.4m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL : 235.6m	DEPTH EOL : 2300.1m	NAVIGATION SYSTEM USED:	SeaPath 200
SMG SOL: 4.9 knots	FEATHER SOL: 1.6 °	NAVIGATION SYSTEM USED:	C-Nav2000
SMG EOL: 5.3 knots	FEATHER EOL: 1.1 °	GRAVITY METER:	BMG-II: used, SN210
WEATHER	MAX FEATHER: -13.4 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL: 8SW knots		MAG DEC USED :	0.50°
WIND EOL: E 8.9 knots	00:00 – 04:00 local => DN	12:00 – 16:00 local => MM	
SEAS SOL: <1m	04:00 – 08:00 local => DN	16:00 – 20:00 local => MM	
SEAS EOL: 0-1m	08:00 – 12:00 local => DN	20:00 – 00:00 local => MM	

SP	TIME(UTC)	EVENT	COMMENTS
3254	02:28	SOL	start of line
3223	02:33	FFSP	First full fold shotpoint
1794-1782	06:18-06:20	Spectra	Restart Spectra ncc and main
1001	08:23	LFSP	Last full fold shot point
873	08:43	EOL	end of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	3223	08° 56' 25.353"	83° 59' 41.390"
LFSP	1001	08° 29' 30.025"	84° 13' 14.568"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1260.0.p190 **P2** 1260.0.p294

MGL11061260.LMN MGL11061260.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Complete

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	intermittent	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

Seq # 036

Line Name: MGL11061124 **NAVIGATION**

Line Brg : 25.9 ° **LINE LOGS**

DATE: 2011-04-27 Lamont-Doherty Earth Observatory

JULIAN DAY: 117

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -304.3m	DEPTH SOL : 2384.9m	NAVIGATION SYSTEM USED: C-Nav3050 - Primary	
DC EOL : -391.9m	DEPTH EOL : 72.8m	NAVIGATION SYSTEM USED: SeaPath 200	
SMG SOL: 3.4 knots	FEATHER SOL: 33.7 °	NAVIGATION SYSTEM USED: C-Nav2000	
SMG EOL: 3.9 knots	FEATHER EOL: 12.7 °	GRAVITY METER: BMG-II: used, SN210	
WEATHER	MAX FEATHER: 12.7 °	MAGNETOMETER: GeoMetrics: used	
WIND SOL: NW 14.8 knots		MAG DEC USED : 0.50°	
WIND EOL: W 6.9 knots	00:00 – 04:00 local => DN	12:00 – 16:00 local => MM	
SEAS SOL: 0-1m	04:00 – 08:00 local => DN	16:00 – 20:00 local => MM	
SEAS EOL: 0-1m	08:00 – 12:00 local => DN	20:00 – 00:00 local => MM	

SP	TIME(UTC)	EVENT	COMMENTS
812	10:14	SOL	start of line
1001	10:59	FFSP	First full fold shotpoint
835	10:19	Spectra	Restart of ncc and main
1268-1281	11:59:28	Spectra	Restart spectra main
1739	13:38	Source	No shot fired
1775	13:46	Source	Compressor down
1806	13:53	Source	One gun 40 cu in
3223	19:24	LFSP	Last full fold shot point
3351	19:52	EOL	end of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	1001	08° 30' 43.832"	84° 15' 44.490"
LFSP	3223	08° 57' 44.338"	84° 02' 21.672"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1124.0.p190 P2 1124.0.p294

MGL11061124.LMN MGL11061124.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: COMPLETE

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

Seq # 037

Line Name: MGL11061268

Line Brg : 205.9 °

NAVIGATION LINE LOGS

DATE: 2011-04-27

JULIAN DAY: 117

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

CLIENT: NSF/Bangs

SURVEY: CRISP 3D

MGL1106

DC SOL : 80.1m
DC EOL : 192.3m
SMG SOL: 4.4 knots
SMG EOL: 5.0 knots

WEATHER

WIND SOL: SW 11.2 knots
WIND EOL: SW 8.0 knots
SEAS SOL: 0-1m
SEAS EOL: 0-1m

DEPTH SOL : 59.0m
DEPTH EOL : 143.2m
FEATHER SOL: 13.6 °
FEATHER EOL: -11.2 °
MAX FEATHER: -13.4 °

00:00 – 04:00 local =>	DN	12:00 – 16:00 local =>	MM
04:00 – 08:00 local =>	DN	16:00 – 20:00 local =>	MM
08:00 – 12:00 local =>	DN	20:00 – 00:00 local =>	MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS
3308	21:40	SOL	start of line
3223	21:56	FFSP	First full fold shotpoint
2831	23:03	LFSP	Last full fold shot point
2703	23:24	LGSP	Last good shot point
2690	23:26	EOL	Stop d/t loss of compressor

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	3223	08° 56' 21.444"	83° 59' 33.485"
LFSP	2831	08° 51' 37.493"	84° 01' 59.021"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1268.0.p190

P2 1268.0.p294

MGL11061268.LMN MGL11061268.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Incomplete

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

Seq # 038

Line Name: MGL11061268A **NAVIGATION**

Line Brg : 205.9 ° **LINE LOGS**

DATE: 2011-04-28 Lamont-Doherty Earth Observatory

JULIAN DAY: 118

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : 225.1m	DEPTH SOL : 359.6m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL : 294.6m	DEPTH EOL : 2288.2m	NAVIGATION SYSTEM USED:	SeaPath 200
SMG SOL: 5.1 knots	FEATHER SOL: -8.2 °	NAVIGATION SYSTEM USED:	C-Nav2000
SMG EOL: 5 knots	FEATHER EOL: -0.1 °	GRAVITY METER:	BMG-II: used, SN210
WEATHER	MAX FEATHER: -8.2 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL: 5 SE knots		MAG DEC USED :	0.50°
WIND EOL: 5 SW knots	00:00 – 04:00 local => DN / 12:00 – 16:00 local => MM		
SEAS SOL: 1-3ft	04:00 – 08:00 local => DN / 16:00 – 20:00 local => MM		
SEAS EOL: 1-3ft	08:00 – 12:00 local => DN / 20:00 – 00:00 local => MM		

SP	TIME(UTC)	EVENT	COMMENTS
2407	00:11	SOL	start of line
2279	00:31	FFSP	First full fold shotpoint
1130-1104	03:34-03:38	spectra	DLN not logging
1001	03:54	LFSP	Last full fold shot point
873	04:15	EOL	end of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	2279	08° 44' 55.988"	84° 05' 20.613"
LFSP	1001	08° 29' 26.226"	84° 13' 06.848"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1268A.0.p190 P2 1268A.0.p294

MGL11061268A.LN MGL11061268A.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Incomplete

Posnet locations & remarks: good - none - intermittent

Acoustic remarks:

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Seq # 039

Line Name: MGL11061124I **Line Brg :** 25.9 °

NAVIGATION LINE LOGS

DATE: 2011-04-28 **JULIAN DAY:** 118

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

CLIENT: NSF/Bangs **SURVEY:** CRISP 3D **MGL1106**

DC SOL : -49.1m	DEPTH SOL : 2380.9m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL : -168.7m	DEPTH EOL : 72.5m	NAVIGATION SYSTEM USED:	SeaPath 200
SMG SOL: 3.6 knots	FEATHER SOL: 34.8 °	NAVIGATION SYSTEM USED:	C-Nav2000
SMG EOL: 4.0 knots	FEATHER EOL: 15.4 °	GRAVITY METER:	BMG-II: used, SN210
WEATHER	MAX FEATHER: 34.8 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL: calm knots		MAG DEC USED :	0.50°
WIND EOL: E 4.2 knots			
SEAS SOL: <1m			
SEAS EOL: 0-1m			

00:00 – 04:00 local =>	DN	12:00 – 16:00 local =>	MM
04:00 – 08:00 local =>	DN	16:00 – 20:00 local =>	MM
08:00 – 12:00 local =>	DN	20:00 – 00:00 local =>	MM

SP	TIME(UTC)	EVENT	COMMENTS
825	05:43	SOL	start of line
1001	6:22	FFSP	First full fold shotpoint
2398-2404	11:28-11:29	Spectra	Spectra main restarted
2493	11:48	MMO	Power off for turtles at SP 2493
2519	11:53	MMO	Full power
2803	12:56	MMO	Power down for dolphin SP 2803
2815	12:58	MMO	Shut down for dolphin SP 2815
3025	1354	MMO	Full power
3223	14:36	LFSP	Last full fold shot point
3351	15:03	EOL	end of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	1001	08° 30' 40.548"	84° 15' 37.789"
LFSP	3223	08° 57' 41.515"	84° 02' 15.906"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1124I.0.p190 P2 1124I.0.p294

MGL11061124I.LM MGL11061124I.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Complete

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

Seq # 040

Line Name: MGL11061268I **NAVIGATION**

Line Brg : 205.9 ° **LINE LOGS**

DATE: 2011-04-28 Lamont-Doherty Earth Observatory

JULIAN DAY: 118

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -189.5m	DEPTH SOL : 61.4m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL : -52.8m	DEPTH EOL : 2292.5m	NAVIGATION SYSTEM USED:	SeaPath 200
SMG SOL: 4.4 knots	FEATHER SOL: 56.5 °	NAVIGATION SYSTEM USED:	C-Nav2000
SMG EOL: 4.9 knots	FEATHER EOL: 4.3 °	GRAVITY METER:	BMG-II: used, SN210
WEATHER	MAX FEATHER: 16.3 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL: NW 9.5 knots		MAG DEC USED :	0.50°

WIND EOL: NW9.9 knots	00:00 – 04:00 local =>	DN	12:00 – 16:00 local =>	MM	
SEAS SOL: 0-1m	04:00 – 08:00 local =>	DN	16:00 – 20:00 local =>	MM	
SEAS EOL: 0-1m	08:00 – 12:00 local =>	DN	20:00 – 00:00 local =>	MM	

SP	TIME(UTC)	EVENT	COMMENTS
3402	16:36	SOL	start of line
3360	1644	MMO	Shut Down for turtle
3322	1651	MMO	Power Up
3223	17:09	FFSP	First full fold shotpoint
1001	23:11	LFSP	Last full fold shot point
873	23:32	EOL	end of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	3223	08° 56' 18.229"	83° 59' 26.996"
LFSP	1001	08° 29' 21.335"	84° 12' 56.929"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1268I.0.p190

P2 1268I.0.p294

MGL11061268I.LM MGL11061268I.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: COMPLETE

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

Seq # 041

Line Name: MGL11061132 **NAVIGATION**

Line Brg : 25.9 ° **LINE LOGS**

DATE: 2011-04-29 Lamont-Doherty Earth Observatory

JULIAN DAY: 119

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : 107.9m	DEPTH SOL : 2367.1m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL : -303.3m	DEPTH EOL : 71.3m	NAVIGATION SYSTEM USED:	SeaPath 200
SMG SOL: 3.7 knots	FEATHER SOL: 38.5 °	NAVIGATION SYSTEM USED:	C-Nav2000
SMG EOL: 4.1 knots	FEATHER EOL: 17.9 °	GRAVITY METER:	BMG-II: used, SN210
WEATHER	MAX FEATHER: 38.5 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL: 5NE knots		MAG DEC USED :	0.50°

WIND EOL: NE 10.3 knots	00:00 – 04:00 local =>	DN	12:00 – 16:00 local =>	MM	
SEAS SOL: <1m	04:00 – 08:00 local =>	DN	16:00 – 20:00 local =>	MM	
SEAS EOL: 1m	08:00 – 12:00 local =>	DN	20:00 – 00:00 local =>	MM	

SP	TIME(UTC)	EVENT	COMMENTS
818	01:01	SOL	start of line
1001	01:3	FFSP	First full fold shotpoint
2834-2840	08:21-08:22	spectra	restart spectra main
3223	9:50	LFSP	Last full fold shot point
3351	10:16	EOL	end of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	1001	08° 30' 35.916"	84° 15' 28.489"
LFSP	3223	08° 57' 38.852"	84° 02' 10.615"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1132.0.p190

P2 1132.0.p294

MGL11061132.LMN MGL11061132.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Complete

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

Seq # 042

Line Name: MGL11061276 **NAVIGATION**

Line Brg : 205.9 ° **LINE LOGS**

DATE: 2011-04-29 Lamont-Doherty Earth Observatory

JULIAN DAY: 119

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -236.5m	DEPTH SOL : 58.2m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL : 5.4m	DEPTH EOL : 2286.2m	NAVIGATION SYSTEM USED:	SeaPath 200
SMG SOL: 4.6 knots	FEATHER SOL: 58 °	NAVIGATION SYSTEM USED:	C-Nav2000
SMG EOL: 5.0 knots	FEATHER EOL: -3.8 °	GRAVITY METER:	BMG-II: used, SN210
WEATHER	MAX FEATHER: 22.3 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL: 10.1 NW knots		MAG DEC USED :	0.50°
WIND EOL: NW 7.0 knots	00:00 – 04:00 local => DN	12:00 – 16:00 local => MM	
SEAS SOL: 1m	04:00 – 08:00 local => DN	16:00 – 20:00 local => MM	
SEAS EOL: 1m	08:00 – 12:00 local => DN	20:00 – 00:00 local => MM	

SP	TIME(UTC)	EVENT	COMMENTS
3394	11:53	SOL	start of line
3223	12:25	FFSP	First full fold shotpoint
2754	13:51	MMO	Power Down Turtle
2724	13:56	MMO	Power Up
1001	18:38	LFSP	Last full fold shot point
873	18:58	EOL	end of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	3223	08° 56' 14.061"	83° 59' 18.631"
LFSP	1001	08 29 18.547	84° 12' 51.344"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1276.0.p190 **P2** 1276.0.p294

MGL11061276.LMN MGL11061276.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: COMPLETE

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

Seq # 043

Line Name: MGL11061144 **NAVIGATION**

Line Brg : 25.9 ° **LINE LOGS**

DATE: 2011-04-29 Lamont-Doherty Earth Observatory

JULIAN DAY: 119

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -111.9m	DEPTH SOL : 2344.4m	NAVIGATION SYSTEM USED: C-Nav3050 - Primary	
DC EOL : -253.5m	DEPTH EOL : 10.1m	NAVIGATION SYSTEM USED: SeaPath 200	
SMG SOL: 3.9 knots	FEATHER SOL: 32.3 °	NAVIGATION SYSTEM USED: C-Nav2000	
SMG EOL: 3.9 knots	FEATHER EOL: 10.1 °	GRAVITY METER: BMG-II: used, SN210	
WEATHER	MAX FEATHER: 32.3 °	MAGNETOMETER: GeoMetrics: used	
WIND SOL: SE4.9 knots		MAG DEC USED : 0.50°	
WIND EOL: N 2.1 knots	00:00 – 04:00 local => DN	12:00 – 16:00 local => MM	
SEAS SOL: 1m	04:00 – 08:00 local => DN	16:00 – 20:00 local => MM	
SEAS EOL: 0-1m	08:00 – 12:00 local => DN	20:00 – 00:00 local => MM	

SP	TIME(UTC)	EVENT	COMMENTS
850	20:32	SOL	start of line
1001	21:04	FFSP	First full fold shotpoint
3223	05:26	LFSP	Last full fold shot point
3351	05:53	EOL	end of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	1001	08° 30' 31.644"	84° 15' 19.804"
LFSP	3223	08° 57' 33.978"	84° 02' 00.712"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1140.0.p190

P2 1140.0.p294

MGL11061140.LMN MGL11061140.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: COMPLETE

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

Seq # 044

Line Name: MGL11061284 **NAVIGATION**

Line Brg : 205.9 ° **LINE LOGS**

DATE: 2011-04-30 Lamont-Doherty Earth Observatory

JULIAN DAY: 120

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -214.9m	DEPTH SOL : 60.0m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL : 44.3m	DEPTH EOL : 2298.7m	NAVIGATION SYSTEM USED:	SeaPath 200
SMG SOL: 4.4 knots	FEATHER SOL: 61.0 °	NAVIGATION SYSTEM USED:	C-Nav2000
SMG EOL: 4.8 knots	FEATHER EOL: 0.1 °	GRAVITY METER:	BMG-II: used, SN210
WEATHER	MAX FEATHER: 61.0 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL: N 3.8 knots		MAG DEC USED :	0.50°
WIND EOL: N 9.7 knots	00:00 – 04:00 local => DN / 12:00 – 16:00 local => MM		
SEAS SOL: 0-1m	04:00 – 08:00 local => DN / 16:00 – 20:00 local => MM		
SEAS EOL: 1m	08:00 – 12:00 local => DN / 20:00 – 00:00 local => MM		

SP	TIME(UTC)	EVENT	COMMENTS
3410	07:33	SOL	start of line
3223	08:09	FFSP	First full fold shotpoint
1776	13:59	MMO	Power down for turtle
1144	14:03	FFSP	Power up
1140	14:04	MMO	Power down for turtle
1120	14:08	FFSP	Resume full power
1052	14:19	MMO	Power down for turtle
1025	14:24	FFSP	Full power
1012-1006	14:26	Spectra	Restart spectra main
901	14:44	Spectra	Restart spectra main and ncc dln
1001	14:28	LFSP	Last full fold shot point
873	14:49	EOL	end of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	3223	08° 56' 09.422"	83° 59' 09.308"
LFSP	1001	08° 29' 13.892"	84° 12' 42.011"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1284.0.p190 **P2** 1284.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

MGL11061284.LMN MGL11061284.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Complete

Seq # 045

Line Name: MGL11061148 **NAVIGATION**

Line Brg : 25.9 ° **LINE LOGS**

DATE: 2011-04-30 Lamont-Doherty Earth Observatory

JULIAN DAY: 120

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -125.6m
DC EOL : -267.2m
SMG SOL: 3.9 knots
SMG EOL: 3.8 knots

WEATHER
WIND SOL: W 2.5 knots
WIND EOL: 6NW knots
SEAS SOL: 0-1m
SEAS EOL: 0-1m

DEPTH SOL : 2298.0m
DEPTH EOL : 70.8m
FEATHER SOL: 54.7 °
FEATHER EOL: 8.5 °
MAX FEATHER: 54.7 °

00:00 – 04:00 local => DN
04:00 – 08:00 local => DN
08:00 – 12:00 local => DN
12:00 – 16:00 local => MM
16:00 – 20:00 local => MM
20:00 – 00:00 local => MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS
802	16:16	SOL	start of line
828	16:22	MMO	Power down for turtle
848	16:25	MMO	Full power
1001	16:59	FFSP	First full fold shotpoint
1057	17:11	MMO	Power down for turtle
1076	17:14	MMO	Full power
2171-2238	21:13-21:29	spectra	no shotlog rercoding
3195-3200	01:18-01:20	spectra	P2 not logging
2852	23:59	midnight SP	last shot of the day
3223	01:24	LFSP	Last full fold shot point
3351	01:52	EOL	end of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	1001	08° 30' 28.685"	84° 15' 13.775"
LFSP	3223	08° 57' 29.867"	84° 01' 52.363"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1148.1.p190
P2 1148.1.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

MGL11061148.LMN MGL11061148.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: incomplete

Seq # 046

Line Name: MGL11061292 **NAVIGATION**

Line Brg : 205.9 ° **LINE LOGS**

DATE: 2011-05-01 Lamont-Doherty Earth Observatory

JULIAN DAY: 121

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -174.8m	DEPTH SOL : 56.8m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL : 108.7m	DEPTH EOL : 2308.7m	NAVIGATION SYSTEM USED:	SeaPath 200
SMG SOL: 4 knots	FEATHER SOL: 38.8 °	NAVIGATION SYSTEM USED:	C-Nav2000
SMG EOL: 4.6 knots	FEATHER EOL: -1.9 °	GRAVITY METER:	BMG-II: used, SN210
WEATHER	MAX FEATHER: 38.8 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL: calm knots		MAG DEC USED :	0.50°
WIND EOL: N 7.6 knots	00:00 – 04:00 local => DN	12:00 – 16:00 local => MM	
SEAS SOL: <1m	04:00 – 08:00 local => DN	16:00 – 20:00 local => MM	
SEAS EOL: 0-1m	08:00 – 12:00 local => DN	20:00 – 00:00 local => MM	

SP	TIME(UTC)	EVENT	COMMENTS
3376	03:40	SOL	start of line
3223	04:11	FFSP	First full fold shotpoint
1011-990	10:27-10:30	Spectra	Main restarted
1001		LFSP	Last full fold shot point
873	10:51	EOL	end of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	3223	08° 56' 05.388"	83° 59' 01.146"
LFSP	1001		

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1292.0.p190 **P2** 1292.0.p294

Posnet locations & remarks: good - none - intermittent			
Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

MGL11061292.LMN MGL11061292.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Complete

Seq # 047

Line Name: MGL11061108S **NAVIGATION**

Line Brg : 25.9 ° **LINE LOGS**

DATE: 2011-05-01 Lamont-Doherty Earth Observatory

JULIAN DAY: 121

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -223.2m	DEPTH SOL : 2396.0m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL : -599.5m	DEPTH EOL : 79.3m	NAVIGATION SYSTEM USED:	SeaPath 200
SMG SOL: 3.9 knots	FEATHER SOL: 43.5 °	NAVIGATION SYSTEM USED:	C-Nav2000
SMG EOL: 4.2 knots	FEATHER EOL: 7.3 °	GRAVITY METER:	BMG-II: used, SN210
WEATHER	MAX FEATHER: 14.7 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL: N 2.9 knots		MAG DEC USED :	0.50°
WIND EOL: W 4.2 knots	00:00 – 04:00 local => DN / 12:00 – 16:00 local => MM		
SEAS SOL: 0-1m	04:00 – 08:00 local => DN / 16:00 – 20:00 local => MM		
SEAS EOL: 0-1m	08:00 – 12:00 local => DN / 20:00 – 00:00 local => MM		

SP	TIME(UTC)	EVENT	COMMENTS
814	12:35	SOL	start of line
1001	13:16	FFSP	First full fold shotpoint – infill
1723	14:04	infield	
1224-1749	14:4-15:55	reshoot	
1760-2064	15:57-17:02	infield	
2065-2119	17:03-17:15	reshoot	
2120-2193	17:15-17:31	infield	
2194-2240	17:31-17:42	reshoot	
2241-2395	17:42-1816	infield	
2396-2444	18:16-18:27	reshoot	
2445-2625	18:27-19:09	infield	
2626-2670	19:09-19:18	reshoot	
2671-2701	19:18-19:25	infield	
2702-2750	19:25-19:36	reshoot	
2751	19:36	infield	
3223	21:17	LFSP	Last full fold shot point
3351	21:42	EOL	end of line
			Note: this line originally shot with an 'R' extension to the name, have changed to an 'S' extension

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	1001	08° 30' 51.794"	84° 16' 00.598"
LFSP	3223	08° 57' 56.814"	84° 02' 46.901"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1108S.0.p190 **P2** 1108S.0.p294

MGL11061108R.LM MGL11061108S.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: COMPLETE

Posnet locations & remarks: good - none - intermittent				Acoustic remarks:
Tailbuoy #1	good	Gun string #1	good	
Tailbuoy #2	bad	Gun string #2	good	
Tailbuoy #3	bad	Gun string #3	good	acoustic on TB3 bad
Tailbuoy #4	good	Gun string #4	good	

Seq # 048

Line Name: MGL11061276R **NAVIGATION**

Line Brg : 205.9 ° **LINE LOGS**

DATE: 2011-05-01 Lamont-Doherty Earth Observatory

JULIAN DAY: 121

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -59.1m
DC EOL : -203.2m
SMG SOL: 4.3 knots
SMG EOL: 4.9 knots

WEATHER
WIND SOL: 7SW knots
WIND EOL: NE 8.6 knots
SEAS SOL: <1m
SEAS EOL: 0-1m

DEPTH SOL : 57.9m
DEPTH EOL : 2297.7m
FEATHER SOL: 28.5 °
FEATHER EOL: -2.3 °
MAX FEATHER: 28.5 °

00:00 – 04:00 local => DN
04:00 – 08:00 local => DN
08:00 – 12:00 local => DN
12:00 – 16:00 local => MM
16:00 – 20:00 local => MM
20:00 – 00:00 local => MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS
3327	23:46	SOL	start of line
3253	23:59	midnight SP	last shot of the day
3223	00:05	FFSP	First full fold shotpoint – infill
2754	01:31	infill	
2753-2725	01:31-01:36	reshoot	
2724	01:36	infill	
2601	01:57	missed sp	
1190	05:44	infill	
1189-1162	05:45-05:49	reshoot	
1161-1106	05:49-05:57	infill	
1105-1087	05:57-06:00	reshoot	
1086-EOL	06:01-06:34	infill	
977-973	06:16	spectra	restasrt spectra main
1001	06:14	LFSP	Last full fold shot point
873	06:34	EOL	end of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	3223	08° 56' 15.763"	83° 59' 22.059"
LFSP	1001	08° 29' 15.059"	84° 12' 44.276"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1276R.0.p190 **P2** 1276R.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks: acoustic on TB3 bad

MGL11061276R.LM MGL11061276R.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Complete

Seq # 049

Line Name: MGL11061148I **NAVIGATION**

Line Brg : 25.9 ° **LINE LOGS**

DATE: 2011-05-02 Lamont-Doherty Earth Observatory

JULIAN DAY: 122

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : 29.9m
DC EOL : -194.1m
SMG SOL: 3.4 knots
SMG EOL: 3.8 knots
WEATHER
WIND SOL: W 5.3 knots
WIND EOL: N 2.1 knots
SEAS SOL: 0-1m
SEAS EOL: 0-1m

DEPTH SOL : 2289.7m
DEPTH EOL : 72.3m
FEATHER SOL: 44.8 °
FEATHER EOL: 9.9 °
MAX FEATHER: 44.8 °

00:00 – 04:00 local =>	DN	12:00 – 16:00 local =>	MM
04:00 – 08:00 local =>	DN	16:00 – 20:00 local =>	MM
08:00 – 12:00 local =>	DN	20:00 – 00:00 local =>	MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS
803	08:03	SOL	start of line
1001	08:50	FFSP	First full fold shotpoint – infill
803 – 828	08:03-08:09	infill	
829 – 847	08:09-08:13	reshoot	
848 – 1057	08:13-09:02	infill	
1058 – 1075	09:02-09:06	reshoot	
1076 – 1229	09:06-09:40	infill	
1230 – 1262	09:40-09:47	reshoot	
1263 – 1653	09:47-11:16	infill	
1654 – 1670	11:16-11:20	reshoot	
1671 – 1734	11:20-11:35	infill	
1735 - 1747	11:35-11:38	reshoot	
1748 – 2402	11:38-14:04	infill	
2403 – 2427	14:04-14:10	reshoot	
2428 – 2721	14:10-15:14	infill	
2722 – 2903	15:15-15:54	reshoot	
2904 – 3351	15:54-17:27	infill	
2411-2414	14:06-14:07	Spectra	Restart Spectra main
2993-2996	16:13-16:14	Spectra	Restart Spectra main
3005	16:16	Spectra	Estimate position
3169	16:50	LFSP	Last full fold shot point due to mammal sightings
3351	17:27	EOL	end of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	1001	08° 30' 26.388"	84° 15' 09.110"
LFSP	3169	08° 56' 47.188"	84° 02' 05.163"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1	P2
1148I.0.p190	1148I.0.p294
1148I.1.p190	1148I.1.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks: acoustic on TB3 intermittent

MGL11061148I.LM MGL11061148I.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Incomplete

Seq # 050

Line Name: MGL11061268R **Line Brg :** 205.9 °

NAVIGATION LINE LOGS

DATE: 2011-05-02 **JULIAN DAY:** 122

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : 97.9m
DC EOL : 297.9m
SMG SOL: 4.2 knots
SMG EOL: 5.0 knots
WEATHER
WIND SOL: N 7.0 knots
WIND EOL: N 8.2 knots
SEAS SOL: 0-1 m
SEAS EOL: 0-1 m

DEPTH SOL : 61.9m
DEPTH EOL : 426.8m
FEATHER SOL: 0.3 °
FEATHER EOL: 10.5 °
MAX FEATHER: 10.5 °

00:00 – 04:00 local =>	DN	12:00 – 16:00 local =>	MM
04:00 – 08:00 local =>	DN	16:00 – 20:00 local =>	MM
08:00 – 12:00 local =>	DN	20:00 – 00:00 local =>	MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS		
3224	19:45	SOL	start of line		
3223	19:45	FFSP	First full fold shotpoint – infill		
3145	19:59	FGSP	First Good shot point		
2964	20:52	infill	Last Infill		
2963-2728	20:52-21:13	reshoot	Reshoot		
2727-2704	21:13-21:17	infill	Infill		
2703-2408	21:17-22:08	reshoot	Reshoot		
2408	22:08	LFSP	Last full fold shot		
2407-2280	22:09-22:29	infill	Infill		
2280	22:29	EOL	end of line		
	23:59	midnight	on line at midnight in gap of no acquisition.		
1232	01:19	SOL	Restart line after compressor work	Lat 8 32 08.288n	Lon 84 11 30.424w
1095	01:44	FGSP/FFSP	Resume data acquisition	Lat 8 30 26.257n	Lon 84 12 15.600w
1031	01:55	LFSP	Last full fold shot	Lat 8 29 39.662n	Lon 84 12 38.891w
903	02:18	EOL	end of line	Lat 8 28 09.464n	Lon 84 13 31.490w

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	3223	08° 56' 22.446"	83° 59' 35.523"
LFSP	2408	08° 46' 31.553"	84° 04' 37.024"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1268R.0.p190 **P2** 1268R.0.p294

Posnet locations & remarks: good - none - intermittent			
Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:
acoustic on TB3 intermittent

MGL11061268R.LM MGL11061268R.SCN(001) Langseth.RTCN
SP spacing: 25m

line status: INCOMPLETE

Seq # 051

Line Name: MGL11061124R **Line Brg :** 025.9 °

NAVIGATION LINE LOGS

DATE: 2011-05-03 **JULIAN DAY:** 123

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY EARTH INSTITUTE

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -220.2m	DEPTH SOL : 1236.9m	NAVIGATION SYSTEM USED: C-Nav3050 - Primary	
DC EOL : -288.0m	DEPTH EOL : 73.5m	NAVIGATION SYSTEM USED: SeaPath 200	
SMG SOL: 3.82 knots	FEATHER SOL: 1.6 °	NAVIGATION SYSTEM USED: C-Nav2000	
SMG EOL: 4.3 knots	FEATHER EOL: 6.4 °	GRAVITY METER: BMG-II: used, SN210	
WEATHER	MAX FEATHER: 13.7 °	MAGNETOMETER: GeoMetrics: used	
WIND SOL: 8NW knots		MAG DEC USED : 0.50°	
WIND EOL: N 7.8 knots	00:00 – 04:00 local => DN	12:00 – 16:00 local => MM	
SEAS SOL: 0-1 m	04:00 – 08:00 local => DN	16:00 – 20:00 local => MM	
SEAS EOL: 0-1 m	08:00 – 12:00 local => DN	20:00 – 00:00 local => MM	

SP	TIME(UTC)	EVENT	COMMENTS
1644	6:03	SOL	start of line
1688-1698	06:12-06:14	Spectra	Restart spectra main and ncc – P2 was not logging
1772	6:30	FFSP	First full fold shotpoint – infill
SOL-1774	6:03-6:31	Infill	
1775-2182	6:31-7:56	Reshoot	
2281-2300	8:16-8:21	Spectra	Restart spectra main and ncc
2435-2438	08:50-08:51	Spectra	Restart spectra main
2539	9:14	Spectra	Spectra ncc restarted – P2 stopped logging
2183-2707	7:56-9:52	Infill	
2708-2733	9:52 – 9:58	Reshoot	
2787-2791	10:09-10:10	Spectra	Main restarted
2734-3057	9:58-11:06	Infill	
3058-3268	11:06-11:46	Reshoot	
3269-3351	11:46 – 12:02	Infill	
3223	11:38	LFSP	
3351	12:02	EOL	P2 stopped logging at end of line ~SP3349

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	1772	08° 40' 05.573"	84° 11' 04.819"
LFSP	3223	08° 57' 43.548"	84° 02' 20.039"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1	P2
1124R.0.p190	1124R.0.p294
1124R.1.p190	1124R.1.p294
1124R.2.p190	1124R.2.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

MGL11061124R.LM MGL11061124R.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Incomplete

Seq # 052

Line Name: MGL11061252R **NAVIGATION**

Line Brg : 205.9 ° **LINE LOGS**

DATE: 2011-05-03 Lamont-Doherty Earth Observatory

JULIAN DAY: 123

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -286.2m	DEPTH SOL : 59.5m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL : -545.7m	DEPTH EOL : 2279.0m	NAVIGATION SYSTEM USED:	SeaPath 200
SMG SOL: 3.8 knots	FEATHER SOL: 42.5 °	NAVIGATION SYSTEM USED:	C-Nav2000
SMG EOL: 4.4 knots	FEATHER EOL: -2.6 °	GRAVITY METER:	BMG-II: used, SN210
WEATHER	MAX FEATHER: -17.5 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL: NW 2.9 knots		MAG DEC USED :	0.50°
WIND EOL: NE 9.3 knots	00:00 – 04:00 local => DN	12:00 – 16:00 local => MM	
SEAS SOL: 0-1 m	04:00 – 08:00 local => DN	16:00 – 20:00 local => MM	
SEAS EOL: 0-1 m	08:00 – 12:00 local => DN	20:00 – 00:00 local => MM	

SP	TIME(UTC)	EVENT	COMMENTS
3378	13:51	SOL	start of line
3292	14:12	Spectra	Estimate positon
3280	14:14	Spectra	Restart ncc
3223	14:27	FFSP	First full fold shotpoint – infill
1509-1409	19:50-19:52	Spectra	No Data logger node message
1001	21:23	LFSP	
873	21:46	EOL	

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	3223	08° 56' 25.906"	83° 59' 42.487"
LFSP	1001	08° 29' 22.762"	84° 12' 59.785"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1252R.0.p190 **P2** 1252R.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

MGL11061252R.LM MGL11061252R.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: COMPLETE

Seq # 053

Line Name: MGL11061244R **Line Brg :** 205.9 °

NAVIGATION LINE LOGS

DATE: 2011-05-04 **JULIAN DAY:** 124

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -463.0m
DC EOL : -502.2m
SMG SOL: 3.9 knots
SMG EOL: 4.3 knots

WEATHER
WIND SOL: NE 8.0 knots
WIND EOL: SW 7 knots
SEAS SOL: 0-1m
SEAS EOL: calm

DEPTH SOL : 434.7m
DEPTH EOL : 2297.9m
FEATHER SOL: -2.4 °
FEATHER EOL: 3 °
MAX FEATHER: -9.8 °

00:00 – 04:00 local =>	DN	12:00 – 16:00 local =>	MM
04:00 – 08:00 local =>	DN	16:00 – 20:00 local =>	MM
08:00 – 12:00 local =>	DN	20:00 – 00:00 local =>	MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS
2271	22:02	SOL	start of line
2143	22:29	FFSP	First Full Fold Shot Point
1689	23:59	Midnight SP	last shot of the day
1001	02:07	LFSP	Last Full Fold Shot Point
873	02:30	EOL	End of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	2143	08° 43' 21.708"	84° 06' 19.662"
LFSP	1001	08° 29' 27.811"	84° 13' 10.066"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1244R.0.p190 **P2** 1244R.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

MGL11061244R.LM MGL11061244R.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: incomplete

Seq # 054

Line Name: MGL11061108T **Line Brg :** 25.9 °

NAVIGATION LINE LOGS

DATE: 2011-05-05 **JULIAN DAY:** 125

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY EARTH INSTITUTE

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -190.9m
DC EOL : 69.1m
SMG SOL: 3.8 knots
SMG EOL: 3.9 knots
WEATHER
WIND SOL: 7NW knots
WIND EOL: NW 5.1 knots
SEAS SOL: calm
SEAS EOL: 0-1m

DEPTH SOL : 2371.7m
DEPTH EOL : 73.9m
FEATHER SOL: 29.7 °
FEATHER EOL: 2.6 °
MAX FEATHER: 29.7 °

00:00 – 04:00 local =>	DN	12:00 – 16:00 local =>	MM
04:00 – 08:00 local =>	DN	16:00 – 20:00 local =>	MM
08:00 – 12:00 local =>	DN	20:00 – 00:00 local =>	MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS
878	04:25	SOL	start of line – infill
1001	04:52	FFSP	First Full Fold Shot Point
SOL-1238	04:25-05:43	infill	sp range
1239-1748	05:43-07:38	reshoot	sp range
1749-EOL	07:39-13:19	infill	sp range
1686-1690	07:25-07:26	Spectra	Restart spectra main
2175	09:14	Spectra	Restarted ncc and dln – P2 not logging
2498-2502	10:23	Spectra	Restart spectra main
3178-2318	12:41	Spectra	Restart spectra main
3223	12:50	LFSP	Last Full Fold Shot Point
3351	13:17	EOL	End of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	1001	08° 30' 53.345"	84° 16' 07.547"
LFSP	3223	08° 57' 10.992"	84° 02' 14.791"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1	P2
1108T.0.p190	1108T.0.p294
1108T.1.p190	1108T.1.p294
1108T.2.p190	1108T.2.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

MGL11061108T.LM MGL11061108T.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Complete

Seq # 055

Line Name: MGL11061244S **NAVIGATION**

Line Brg : 205.9 ° **LINE LOGS**

DATE: 2011-05-05 Lamont-Doherty Earth Observatory

JULIAN DAY: 125

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : 15.1m
DC EOL : 206.5m
SMG SOL: 3.7 knots
SMG EOL: 4 knots

WEATHER
WIND SOL: NE 6.3 knots
WIND EOL: SW 10 knots
SEAS SOL: 0-1m
SEAS EOL: 0-1m

DEPTH SOL : 61.1m
DEPTH EOL : 2297.4m
FEATHER SOL: 60.4 °
FEATHER EOL: -1.5 °
MAX FEATHER: -14.4 °

00:00 – 04:00 local =>	DN	12:00 – 16:00 local =>	MM
04:00 – 08:00 local =>	DN	16:00 – 20:00 local =>	MM
08:00 – 12:00 local =>	DN	20:00 – 00:00 local =>	MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS
3427	15:11	SOL	start of line – infill
3223	15:57	FFSP	First Full Fold Shot Point
SOL – 3132	15:11 -16:18	infill	sp range
3131 – 2717	16:19 -17:51	reshoot	sp range
2716 – 1571	17:51-21:42	infill	sp range
1570 – 1502	21:43-21:56	reshoot	sp range
1501 – EOL	21:56-	infill	sp range
2944-2940	17:01-17:02	Spectra	Restart spectra main
1001	22:35	LFSP	Last Full Fold Shot Point
881	23:59:00	midnight SP	last shot of the day
873	00:01	EOL	End of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	3223	08° 56' 32.921"	83° 59' 56.762"
LFSP	1001	08° 29' 37.965"	84° 13' 30.712"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1244S.0.p190 **P2** 1244S.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

MGL11061244S.LN MGL11061244S.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: incomplete

Seq # 056

Line Name: MGL11061068R **Line Brg :** 25.9 °

NAVIGATION LINE LOGS

DATE: 2011-05-06 **JULIAN DAY:** 126

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -348.9m
DC EOL : -319.6m
SMG SOL: 4.3 knots
SMG EOL: 3.6 knots
WEATHER
WIND SOL: S 2 knots
WIND EOL: NW 12.6 knots
SEAS SOL: 1m
SEAS EOL: 0-1m

DEPTH SOL : 2427.4m
DEPTH EOL : 82.9m
FEATHER SOL: 21.2 °
FEATHER EOL: 1.2 °
MAX FEATHER: 21.2 °

00:00 – 04:00 local =>	DN	12:00 – 16:00 local =>	MM
04:00 – 08:00 local =>	DN	16:00 – 20:00 local =>	MM
08:00 – 12:00 local =>	DN	20:00 – 00:00 local =>	MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS
912	02:10	SOL	start of line – infill
1001	02:28	FFSP	First Full Fold Shot Point
835-2875	02:10-09:27	infill	sp range
2876-3357	09:27-11:10	reshoot	sp range
3057-3061	10:06	Spectra	Restarat spectra main
3223	10:41	LFSP	Last Full Fold Shot Point
3351	11:10	EOL	End of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	1001	08° 31' 22.633"	84° 17' 03.507"
LFSP	3223	08° 58' 14.899"	84° 03' 23.756"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1068R.0.p190 **P2** 1068R.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

MGL11061068R.LM MGL11061068R.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Complete

Seq # 057

Line Name: MGL11061212S **NAVIGATION**

Line Brg : 205.9 ° **LINE LOGS**

DATE: 2011-05-06 Lamont-Doherty Earth Observatory

JULIAN DAY: 126

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : 182.6m
DC EOL : 699.6m
SMG SOL: 3.7 knots
SMG EOL: 3.9 knots
WEATHER
WIND SOL: N 8.8 knots
WIND EOL: E 7.8 knots
SEAS SOL: 1-2m
SEAS EOL: 0-1m

DEPTH SOL : 66.2m
DEPTH EOL : 2288.8m
FEATHER SOL: 59.4 °
FEATHER EOL: -5.1 °
MAX FEATHER: 16.2 °

00:00 – 04:00 local => DN
04:00 – 08:00 local => DN
08:00 – 12:00 local => DN
12:00 – 16:00 local => MM
16:00 – 20:00 local => MM
20:00 – 00:00 local => MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS
3406	13:11	SOL	start of line – infill
3223	13:50	FFSP	First Full Fold Shot Point
SOL-3062	13:11-14:24	infill	sp range
3061-3024	14:25-14:33	reshoot	sp range
3023-2916	14:33-14:59	infill	sp range
2915-2573	14:59-16:21	reshoot	sp range
2572-1001	16:21-22:12	infill	sp range
1001	22:12	LFSP	Last Full Fold Shot Point
873	22:38	EOL	End of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	3223	08° 56' 53.901"	84° 00' 39.518"
LFSP	1001	08° 30' 02.382"	84° 14' 20.487"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1212S.0.p190 **P2** 1212S.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

MGL11061212S.LN MGL11061212S.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: COMPLETE

Seq # 058

Line Name: MGL11061052R **Line Brg :** 25.9 °

NAVIGATION LINE LOGS

DATE: 2011-05-07 **JULIAN DAY:** 127

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : 109.1m
DC EOL : 89.2m
SMG SOL: 4.1 knots
SMG EOL: 3.7 knots
WEATHER
WIND SOL: 11NW knots
WIND EOL: 8E knots
SEAS SOL: 1-2m
SEAS EOL: 1-2m

DEPTH SOL : 2432.2m
DEPTH EOL : 975.8m
FEATHER SOL: 33.9 °
FEATHER EOL: -0.1 °
MAX FEATHER: 2.5 °

00:00 – 04:00 local => DN 12:00 – 16:00 local => MM
04:00 – 08:00 local => DN 16:00 – 20:00 local => MM
08:00 – 12:00 local => DN 20:00 – 00:00 local => MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS
898	00:32	SOL	start of line – infill
1001	00:54	FFSP	First Full Fold Shot Point
		infill	sp range
		reshoot	sp range
		infill	sp range
		reshoot	sp range
		infill	sp range
		LFSP	Last Full Fold Shot Point
1807	03:45	EOL	End of line
			**EOL early due to Spectra lock-up. Line is incomplete. Restart line at SEQ 059.

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	1001	08° 31' 25.757"	84° 17' 09.682"
LFSP	3223		

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1052R.0.p190 **P2** 1052R.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

MGL11061052R.LM MGL11061052R.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: incomplete

Seq # 059

Line Name: MGL11061052R1 **NAVIGATION**

Line Brg : 25.9 ° **LINE LOGS**

DATE: 2011-05-07 Lamont-Doherty Earth Observatory

JULIAN DAY: 127

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : 129.9m	DEPTH SOL : 912.4m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL : -261.0m	DEPTH EOL : 84.3m	NAVIGATION SYSTEM USED:	SeaPath 200
SMG SOL: 3.6 knots	FEATHER SOL: -0.2 °	NAVIGATION SYSTEM USED:	C-Nav2000
SMG EOL: 3.9 knots	FEATHER EOL: 6.5 °	GRAVITY METER:	BMG-II: used, SN210
WEATHER	MAX FEATHER: 12.5 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL: 7SE knots		MAG DEC USED :	0.50°

WIND EOL: NE 3 knots	00:00 – 04:00 local =>	DN	12:00 – 16:00 local =>	MM	
SEAS SOL: 1-2m	04:00 – 08:00 local =>	DN	16:00 – 20:00 local =>	MM	
SEAS EOL: 0-1m	08:00 – 12:00 local =>	DN	20:00 – 00:00 local =>	MM	

SP	TIME(UTC)	EVENT	COMMENTS
1838	03:51	SOL	start of line – infill **First shotpoint after restarting Spectra.
1966	04:20	FFSP	First Full Fold Shot Point
898-2728	00:32-7:09	infill	sp range
2729-2774	7:09-7:19	reshoot	sp range
2775-3351	7:19-9:17	infill	sp range
3223	08:50	LFSP	Last Full Fold Shot Point
3351	09:17	EOL	End of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	1966	08° 43' 01.389"	84° 11' 04.417"
LFSP	3223	08° 58' 22.664"	84° 03' 39.405"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1052R1.0.p190 **P2** 1052R1.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

MGL11061052R1.L MGL11061052R1.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: incomplete

Seq # 060

Line Name: MGL11061220R

Line Brg : 205.9 °

NAVIGATION LINE LOGS

DATE: 2011-05-07

JULIAN DAY: 127

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

CLIENT: NSF/Bangs

SURVEY: CRISP 3D

MGL1106

DC SOL : 405.1m	DEPTH SOL : 66.3m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL : 1113.8m	DEPTH EOL : 2293.3m	NAVIGATION SYSTEM USED:	SeaPath 200
SMG SOL: 3.89 knots	FEATHER SOL: 51 °	NAVIGATION SYSTEM USED:	C-Nav2000
SMG EOL: 3.9 knots	FEATHER EOL: -4.1 °	GRAVITY METER:	BMG-II: used, SN210
WEATHER	MAX FEATHER: 15.7 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL: 4SW knots		MAG DEC USED :	0.50°

WIND EOL: 5.1S knots	00:00 – 04:00 local =>	DN	12:00 – 16:00 local =>	MM	
SEAS SOL: 0-1	04:00 – 08:00 local =>	DN	16:00 – 20:00 local =>	MM	
SEAS EOL: 0-1	08:00 – 12:00 local =>	DN	20:00 – 00:00 local =>	MM	

SP	TIME(UTC)	EVENT	COMMENTS
3395	11:13	SOL	start of line – infill **First shotpoint after restarting Spectra.
3223	11:51	FFSP	First Full Fold Shot Point
3395-2990	11:13-12:38	infill	sp range
2989-2716	12:38-13:36	reshoot	sp range
2715-873		infill	sp range
3252-3240	11:45-11:47	Spectra	Restarted main
1798-1795	16:58-16:59	Spectra	Restarted main
1001	19:53	LFSP	Last Full Fold Shot Point
873	20:20	EOL	End of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	3223	08° 56' 50.638"	84° 00' 32.838"
LFSP	1001	08° 30' 09.468"	84° 14' 34.857"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1	P2
1220R.0.p190	1220R.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

MGL11061220R.LM MGL11061220R.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: COMPLETE

Seq # 061

Line Name: MGL11061012R **NAVIGATION**

Line Brg : 25.9 ° **LINE LOGS**

DATE: 2011-05-07 Lamont-Doherty Earth Observatory

JULIAN DAY: 127

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -277.4m
DC EOL : -280.9m
SMG SOL: 3.2 knots
SMG EOL: 3.9 knots
WEATHER
WIND SOL: W3.2 knots
WIND EOL: NW 4.2 knots
SEAS SOL: 0-1m
SEAS EOL: 0-1m

DEPTH SOL : 2485.4m
DEPTH EOL : 94.6m
FEATHER SOL: 22.7 °
FEATHER EOL: 9.1 °
MAX FEATHER: 22.7 °

00:00 – 04:00 local =>	DN	12:00 – 16:00 local =>	MM
04:00 – 08:00 local =>	DN	16:00 – 20:00 local =>	MM
08:00 – 12:00 local =>	DN	20:00 – 00:00 local =>	MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS
883	22:46	SOL	start of line is infill
1001	23:16	FFSP	First Full Fold Shot Point
1182	23:59	midnight SP	Last shot of the day
883-2050	22:46-03:04	infill	sp range
2051-2082	03:04-03:10	reshoot	sp range
2083-2809	03:11-05:45	infill	sp range
2810-3351	05:45-07:38	reshoot	
3166-3172	07:01-07:02	spectra	restart spectra and ncc. P2 stopped logging
3223	07:12	LFSP	Last Full Fold Shot Point
3351	07:38	EOL	End of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	1001	08° 31' 40.253"	84° 17' 39.060"
LFSP	3223	08° 58' 43.760"	84° 04' 22.185"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1012R.0.p190 **P2** 1012R.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

MGL11061012R.LM MGL11061012R.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Complete

Seq # 062

Line Name: MGL11061164R

Line Brg : 205.9 °

NAVIGATION LINE LOGS

DATE: 2011-05-08

JULIAN DAY: 128

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY EARTH INSTITUTE

CLIENT: NSF/Bangs | SURVEY: CRISP 3D | MGL1106

DC SOL : 24.9m
DC EOL : -10.1m
SMG SOL: 3.9 knots
SMG EOL: 3.6 knots

WEATHER

WIND SOL: W 3 knots
WIND EOL: W 12 knots
SEAS SOL: 0-1m
SEAS EOL: 1m

DEPTH SOL : 71.8m
DEPTH EOL : 2301.2m
FEATHER SOL: 60.1 °
FEATHER EOL: -1.3 °
MAX FEATHER: 9.2 °

00:00 – 04:00 local => DN
04:00 – 08:00 local => DN
08:00 – 12:00 local => DN
12:00 – 16:00 local => MM
16:00 – 20:00 local => MM
20:00 – 00:00 local => MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS
3418	09:25	SOL	start of line is infill
3223	10:09	FFSP	First Full Fold Shot Point
3339-3213	09:25-10:11	reshoot	sp range
3212-3131	10:12-10:30	infill	sp range
3130-2859	10:30-11:31	reshoot	sp range
2858-2486	11:31-13:01	infill	sp range
2485-2451	13:01-13:10	reshoot	sp range
2450-2301	13:10-13:47	infill	sp range
2300-2269	13:47-13:54	reshoot	sp range
2268-1787	13:55-15:49	infill	sp range
1786-1748	15:49-15:51	reshoot	sp range
1747-873	15:58-	infill	sp range
2969	11:06	Spectra	Restart spectra dn and dln – P2 not logging
2486	13:02	Spectra	restart main and ncc P2 stoppd logging
1001	18:50	LFSP	Last Full Fold Shot Point
873	19:21	EOL	End of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	3223	08° 57' 18.535"	84° 01' 29.291"
LFSP	1001	08° 30' 20.212"	84° 14' 56.516"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1164R.0.p190
P2 1164R.0.p294

Acoustic remarks:
S1T7 ko'ed

MGL11061164R.LM MGL11061164R.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: complete

Posnet locations & remarks: good - none - intermittent			
Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Seq # 063

Line Name: MGL11061036R **Line Brg :** 025.9 °

NAVIGATION LINE LOGS

DATE: 2011-05-08 **JULIAN DAY:** 128

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -181.6m	DEPTH SOL : 2446.9m	NAVIGATION SYSTEM USED: C-Nav3050 - Primary
DC EOL : -150.1m	DEPTH EOL : 87.0m	NAVIGATION SYSTEM USED: SeaPath 200
SMG SOL: 3.5 knots	FEATHER SOL: 39.9 °	NAVIGATION SYSTEM USED: C-Nav2000
SMG EOL: 4.11 knots	FEATHER EOL: -0.1 °	GRAVITY METER: BMG-II: used, SN210
WEATHER	MAX FEATHER: 39.9 °	MAGNETOMETER: GeoMetrics: used
WIND SOL: W 9.3 knots		MAG DEC USED : 0.50°

WIND EOL: 9.9S knots	00:00 – 04:00 local =>	DN	12:00 – 16:00 local =>	MM	
SEAS SOL: 1 m	04:00 – 08:00 local =>	DN	16:00 – 20:00 local =>	MM	
SEAS EOL: 1 m	08:00 – 12:00 local =>	DN	20:00 – 00:00 local =>	MM	

SP	TIME(UTC)	EVENT	COMMENTS
868	21:29	SOL	start of line is infill
1001	22:00	FFSP	First Full Fold Shot Point
1556	23:59	midnight SP	last shot of the day
3223	5:32	LFSP	Last Full Fold Shot Point
3351	5:58	EOL	End of line
			Note: This line should have been an "I" infill line – no reshoot here.

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	1001	08° 31' 27.306"	84° 17' 12.806"
LFSP	3223	08° 58' 31.544"	84035° 73' 90.000"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1036R.0.p190 **P2** 1036R.0.p294

Posnet locations & remarks: good - none - intermittent			
Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks: S1T7 ko'ed

MGL11061036R.LM MGL11061036R.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: COMPLETED

Seq # 064

Line Name: MGL11061172R **Line Brg :** 205.9 °

NAVIGATION LINE LOGS

DATE: 2011-05-09 **JULIAN DAY:** 129

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : 73.4m
DC EOL : -584.6m
SMG SOL: 2.95 knots
SMG EOL: 3.3 knots
WEATHER
WIND SOL: 7.4S knots
WIND EOL: S 12.8 knots
SEAS SOL: 1m
SEAS EOL: 1m

DEPTH SOL : 70.9m
DEPTH EOL : 2430.7m
FEATHER SOL: 35.2 °
FEATHER EOL: -3.4 °
MAX FEATHER: 10.7 °

00:00 – 04:00 local =>	DN	12:00 – 16:00 local =>	MM
04:00 – 08:00 local =>	DN	16:00 – 20:00 local =>	MM
08:00 – 12:00 local =>	DN	20:00 – 00:00 local =>	MM

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: C-Nav2000
GRAVITY METER: BMG-II: used, SN210
MAGNETOMETER: GeoMetrics: used
MAG DEC USED : 0.50°

SP	TIME(UTC)	EVENT	COMMENTS
3394	7:59	SOL	start of line is infill
3223	08:44	FFSP	First Full Fold Shot Point
2509-2505	11:37-11:38	Spectra	Main crashed
2298-2294	12:31-12:31	Spectra	Main crashed
1034	17:50	Seapath	KO'ed V1G1 d/t lack of corrections
1023	17:52	Seapath	V1G1 ok – back in solution
1131	17:25	LFSP	Last Full Fold shot point
1003	17:58	EOL	End of line
			Note: This line should have been an "I" infill line – no reshoot here.

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	3223	08° 57' 14.702"	84° 01' 21.541"
LFSP	1131	08° 31' 42.947"	84° 13' 45.066"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1172R.0.p190 **P2** 1172R.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:
S1T7 ko'ed

MGL11061172R.LM MGL11061172R.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: COMPLETE

Seq # 065

Line Name: MGL11061100I **Line Brg :** 25.9 °

NAVIGATION LINE LOGS

DATE: 2011-05-09 **JULIAN DAY:** 129

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -187.7m	DEPTH SOL : 2383.7m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL : -1113.5m	DEPTH EOL : 493.2m	NAVIGATION SYSTEM USED:	SeaPath 200
SMG SOL: 4.0 knots	FEATHER SOL: 43.5 °	NAVIGATION SYSTEM USED:	C-Nav2000
SMG EOL: 3.8 knots	FEATHER EOL: 15.5 °	GRAVITY METER:	BMG-II: used, SN210
WEATHER	MAX FEATHER: 15.6 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL: S 9.1 knots		MAG DEC USED :	0.50°

WIND EOL: W 12 knots	00:00 – 04:00 local =>	DN	12:00 – 16:00 local =>	MM
SEAS SOL: 1 m	04:00 – 08:00 local =>	DN	16:00 – 20:00 local =>	MM
SEAS EOL: 1m	08:00 – 12:00 local =>	DN	20:00 – 00:00 local =>	MM

SP	TIME(UTC)	EVENT	COMMENTS
892	20:53	SOL	start of line is infill
948	21:05	FGSP	First good sp after S1 in spec
1001	21:16	FFSP	First Full Fold Shot Point
1785	23:59	midnight SP	last shot of the day
2031	00:41	LFSP	Last Full Fold shot point
2159	01:07	EOL	End of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	1001	08° 30' 58.218"	84° 16' 13.790"
LFSP	2031	08° 43' 31.720"	84° 10' 06.358"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1100I.0.p190 **P2** 1100I.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:
S1T7 ko'ed

MGL11061100I.LM MGL11061100I.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: incomplete

Seq # 066

Line Name: MGL11061012I **NAVIGATION**

Line Brg : 25.9 ° **LINE LOGS**

DATE: 2011-05-10 Lamont-Doherty Earth Observatory

JULIAN DAY: 130

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -609.1m	DEPTH SOL : 113.7m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL : -771.3m	DEPTH EOL : 103.3m	NAVIGATION SYSTEM USED:	SeaPath 200
SMG SOL: 4.1 knots	FEATHER SOL: 28.3 °	NAVIGATION SYSTEM USED:	C-Nav2000
SMG EOL: 4.1 knots	FEATHER EOL: 12.4 °	GRAVITY METER:	BMG-II: used, SN210
WEATHER	MAX FEATHER: 16.9 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL: 14N knots		MAG DEC USED :	0.50°
WIND EOL: 10NW knots	00:00 – 04:00 local => DN / 12:00 – 16:00 local => MM		
SEAS SOL: 1m	04:00 – 08:00 local => DN / 16:00 – 20:00 local => MM		
SEAS EOL: 1m	08:00 – 12:00 local => DN / 20:00 – 00:00 local => MM		

SP	TIME(UTC)	EVENT	COMMENTS
2470	02:21	SOL/FFSP	start of line is infill
3223	04:52	LFSP	Last Full Fold shot point
3351	05:18	EOL	End of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	2470	08° 49' 39.893"	84° 09' 05.059"
LFSP	3223	08° 58' 54.115"	84° 04' 43.285"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1012I.0.p190 **P2** 1012I.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks: S1T7 ko'ed

MGL11061012I.LM MGL11061012I.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: complete

Seq # 067

Line Name: MGL11061220J **Line Brg :** 205.9 °

NAVIGATION LINE LOGS

DATE: 2011-05-10 **JULIAN DAY:** 130

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

CLIENT: NSF/Bangs **SURVEY:** CRISP 3D **MGL1106**

DC SOL : -0.2m	DEPTH SOL : 62.0m	NAVIGATION SYSTEM USED: C-Nav3050 - Primary	
DC EOL : 1332.6m	DEPTH EOL : 2462.4m	NAVIGATION SYSTEM USED: SeaPath 200	
SMG SOL: 2.88 knots	FEATHER SOL: 27.6 °	NAVIGATION SYSTEM USED: C-Nav2000	
SMG EOL: 2.9 knots	FEATHER EOL: -6.5 °	GRAVITY METER: BMG-II: used, SN210	
WEATHER	MAX FEATHER: 27.6 °	MAGNETOMETER: GeoMetrics: used	
WIND SOL: 3N knots		MAG DEC USED : 0.50°	
WIND EOL: 1.3 N knots	00:00 – 04:00 local => DN	12:00 – 16:00 local => MM	
SEAS SOL: 1m	04:00 – 08:00 local => DN	16:00 – 20:00 local => MM	
SEAS EOL: 0-1m	08:00 – 12:00 local => DN	20:00 – 00:00 local => MM	

SP	TIME(UTC)	EVENT	COMMENTS
3374	7:40	SOL	start of line is infill
3223	8:22	FFSP	First full fold shot point
2290	12:24	Spectra	Restart dln – P2 not logging
1137	17:16	Spectra	Restart VIP and VID process
1167	17:08	LFSP	Last Full Fold shot point
1039	17:40	EOL	End of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	3223	08° 56' 49.746"	84° 00' 31.041"
LFSP	1167	08° 32' 11.689"	84° 13' 37.218"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1220J.0.p190 **P2** 1220J.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:
S1T7 ko'ed

MGL11061220J.LN MGL11061220J.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: Incomplete

Seq # 068

Line Name: MGL11061140I **NAVIGATION**

Line Brg : 25.9 ° **LINE LOGS**

DATE: 2011-05-10 Lamont-Doherty Earth Observatory

JULIAN DAY: 130

CLIENT: NSF/Bangs **SURVEY: CRISP 3D** **MGL1106**

DC SOL : -982.8m	DEPTH SOL : 2377.9m	NAVIGATION SYSTEM USED: C-Nav3050 - Primary	
DC EOL : -205.5m	DEPTH EOL : 70.3m	NAVIGATION SYSTEM USED: SeaPath 200	
SMG SOL: 3.7 knots	FEATHER SOL: 43.4 °	NAVIGATION SYSTEM USED: C-Nav2000	
SMG EOL: 3.9 knots	FEATHER EOL: -2.6 °	GRAVITY METER: BMG-II: used, SN210	
WEATHER	MAX FEATHER: 43.4 °	MAGNETOMETER: GeoMetrics: used	
WIND SOL: N3.6 knots		MAG DEC USED : 0.50°	
WIND EOL: NW 8 knots	00:00 – 04:00 local => DN	12:00 – 16:00 local => MM	
SEAS SOL: 1m	04:00 – 08:00 local => DN	16:00 – 20:00 local => MM	
SEAS EOL: calm	08:00 – 12:00 local => DN	20:00 – 00:00 local => MM	

SP	TIME(UTC)	EVENT	COMMENTS
894	21:00	SOL	start of line is infill
1001	21:25	FFSP	First full fold shot point
1724	23:59	midnight SP	last shot of the day
3223	05:17	LFSP	Last Full Fold shot point
3300	05:33	EOL	End of line

VESSEL POSITION

		Latitude (N)	Longitude (W)
FFSP	1001	08° 30' 50.473"	84° 15' 58.040"
LFSP	3223	08° 57' 34.111"	84° 02' 00.983"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5
NRP - COS	282
NRP – CNG (na)	465
COS – CNG (na)	183
NRP – CMP (na)	368

Note: LMN line parameter set to GRID coordinates

P1 1140I.0.p190 **P2** 1140I.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	good	Gun string #1	good
Tailbuoy #2	bad	Gun string #2	good
Tailbuoy #3	bad	Gun string #3	good
Tailbuoy #4	good	Gun string #4	good

Acoustic remarks:

MGL11061140I.LM MGL11061140I.SCN(001) Langseth.RTCN

SP spacing: 25m

line status: complete