Seq# 001

Line Name: MGL0910_05 **NAVIGATION**

Line Brg : 185.5 ° **LINE LOGS**

DATE: 2009-08-27

JULIAN DAY: 239

CLIENT: National Science Foundation **SURVEY: E-TOMO** **MGL0910**

DC SOL : 104.2m
DC EOL :
SMG SOL: 4.0 knots
SMG EOL: 3.8 knots

WEATHER
WIND SOL: 28 knots
WIND EOL: 35 knots
SEAS SOL: 2.5m
SEAS EOL: 3.5m

DEPTH SOL : 2530.6m
DEPTH EOL :
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
05:08	1280	FSP	Start of line
06:17	1261	OBS	OBS crossing W28
08:46	1220	OBS	OBS crossing W27
10:03	1200	OBS	OBS crossing W26
11:33	1176	OBS	OBS crossing W25
12:58	1152	OBS	OBS crossing W24
14:26	1128	OBS	OBS crossing W23
15:54	1105	OBS	OBS crossing W22
17:25	1081	OBS	OBS crossing W21
19:14	1052	OBS	OBS crossing W20
20:28	1033	OBS	OBS crossing W19
21:15	1021	LSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	1280	48° 29' 37.7780"	129° 12' 09.6390"
LGSP	1021	47° 32' 51.1580"	129° 26' 50.3790"

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_05.0.p190	MGL0910_05.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	N/A	Gun string #1	good
		Gun string #2	good
		Gun string #3	good
		Gun string #4	good

Acoustic remarks:

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 420.0m recording length: N/Asec.

line status: Line Complete

Seq# 002

Line Name: MGL0910_04 **NAVIGATION**

Line Brg : 5.5 ° **LINE LOGS**

DATE: 2009-08-27

JULIAN DAY: 239

CLIENT: National Science Foundation **SURVEY: E-TOMO** **MGL0910**

DC SOL : 0.6m
DC EOL : -1.7m
SMG SOL: 3.7 knots
SMG EOL: 3.6 knots

WEATHER
WIND SOL: 25 knots
WIND EOL: 11.2 knots
SEAS SOL: 3.5m
SEAS EOL: 1-2m

DEPTH SOL : 2575.0m
DEPTH EOL : 2525.1m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
23:48	2017	FSP	Start of line, gun volume 4950, string 3 being deployed
23:59	2020	JD 240	Midnight shot point 47 32 31.764 N 129 21 13.369 \
00:02	2021	Source	KO acoustics and GPS on string 3
00:06	2022	Source	Enable acoustics and GPS on string 3
00:10	2023	Source	String on line, gun volume 660(
02:58	2069	OBS	Crossing OBS S15
05:49	2116	OBS	Crossing OBS S16
08:44	2164	OBS	Crossing OBS S17
11:19	2207	OBS	Crossing OBS S18
14:31	2261	LSP/LGSP	Last shot point; last good shot poin

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	2017	47° 31' 51.1500"	129° 21' 18.8240"
LGSP	2261	48° 26.8964'	129° 13.3986'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_04.0.p190	MGL0910_04.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	N/A	Gun string #1	good
		Gun string #2	good
		Gun string #3	good
		Gun string #4	good

Acoustic remarks:

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 420.0m recording length: N/Asec.

line status: Line Complete

Seq# 003

Line Name: MGL0910_37 **NAVIGATION** **DATE:** 2009-08-28

Line Brg : 98 ° **LINE LOGS** **JULIAN DAY:** 240

CLIENT: National Science Foundation **SURVEY: E-TOMO** **MGL0910**

DC SOL : -32.5m	DEPTH SOL : 2567.1m	NAVIGATION SYSTEM USED: C-Nav - Primary
DC EOL : -1440.1m	DEPTH EOL : 2294.9m	NAVIGATION SYSTEM USED: SeaPath 200
SMG SOL: 3.8 knots	FEATHER SOL: N/A °	NAVIGATION SYSTEM USED: Posnet
SMG EOL: 4.0 knots	FEATHER EOL: N/A °	GRAVITY METER: BGM-3: used
WEATHER	MAX FEATHER: N/A °	MAGNETOMETER: GeoMetrics 882
WIND SOL: 8.2 knots		MAG DEC USED : 16.42°
WIND EOL: 11.6 knots		
SEAS SOL: 2-3m	19:00 – 07:00 utc => David Martinson, Ryan Eaton	
SEAS EOL: 2-3m	07:00 – 19:00 utc => Bern McKiernan, David Ng	

UTC	SP	EVENT	COMMENTS
15:08	3021	FSP	Start of line, gun volume – 3300
18:31	3080	LSP	Last shot point

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP			
LGSP			

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_37.0.p190	MGL0910_37.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	N/A	Gun string #1	good
		Gun string #2	good
		Gun string #3	good
		Gun string #4	good

Acoustic remarks:

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 420.0m recording length: N/Asec.

line status: Line Complete

Seq# 004

Line Name: MGL0910_03 **NAVIGATION** **DATE:** 2009-08-28

Line Brg : 186 ° **LINE LOGS** **JULIAN DAY:** 240

CLIENT: National Science Foundation **SURVEY: E-TOMO** **MGL0910**

DC SOL : -53.6m
DC EOL : 8.1m
SMG SOL: 3.6 knots
SMG EOL: 4.1 knots

WEATHER
WIND SOL: 11 knots
WIND EOL: 7.4 knots
SEAS SOL: 2.0m
SEAS EOL: 1.5m

DEPTH SOL : 2409.3m
DEPTH EOL : 2472.5m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
19:09	4264	FSP	Start of line, gun volume 6600
22:15	4211	OBS	Crossing OBS S14
00:12	4178	DGPS	Seapath heading reduced
00:18	4176	DGPS	KO Seapath
01:19	4159	OBS	Crossing OBS S13
02:29	4139	Source	Retrieving string 3, gun volume 4590
02:36	4137	LSP	Early EOL d/t gun string 3 problems

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	4264	48° 25.7296'	128° 47.6056'
LGSP	4137	47° 57.0857'	128° 51.8123'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_04.0.p190	MGL0910_04.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	N/A	Gun string #1	good	
		Gun string #2	good	
		Gun string #3	good	
		Gun string #4	good	

Acoustic remarks:

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 420.0m recording length: N/Asec.

line status: Line Incomplete

Seq# 005

Line Name: MGL0910_38 **Line Brg :** 5.5 °

NAVIGATION LINE LOGS

DATE: 2009-08-29 **JULIAN DAY:** 241

CLIENT: National Science Foundation **SURVEY: E-TOMO** **MGL0910**

DC SOL : 1.9m
DC EOL : -48.8m
SMG SOL: 4264 knots
SMG EOL: 3.9 knots

WEATHER
WIND SOL: 1 knots
WIND EOL: 4.6 knots
SEAS SOL: 1.0m
SEAS EOL: 1-2m

DEPTH SOL : 2420.3m
DEPTH EOL : 2505.2m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
03:29	5140	FSP	Start of line, gun volume 4950, string 3 on board for repai
03:39	5143	SHOT	Missed shotpoint 5142 d/t gun testing
07:22	5208	LSP	Last shot poin

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	5140	47° 57.7950'	128° 49.3605'
LGSP	5208	48° 13.1312'	128° 47.0938'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_38.0.p190	MGL0910_38.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	N/A	Gun string #1	good
		Gun string #2	good
		Gun string #3	good
		Gun string #4	good

Acoustic remarks:

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 420.0m recording length: N/Asec.

line status: Line Incomplete

Seq# 006

Line Name: MGL0910_03R
Line Brg : 185.5 °

NAVIGATION LINE LOGS

DATE: 2009-08-29
JULIAN DAY: 241

CLIENT: National Science Foundation
SURVEY: E-TOMO
MGL0910

DC SOL : -1.1m
DC EOL : -11.9m
SMG SOL: 3.9 knots
SMG EOL: 4.2 knots

WEATHER
WIND SOL: 6.7 knots
WIND EOL: 8.2 knots
SEAS SOL: 1-2m
SEAS EOL: 1-2m

DEPTH SOL : 2502.9m
DEPTH EOL : 2680.6m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
08:48	6199	FSP	Start of line
08:52	6198	FGSP	First good shot poin
11:08	6159	OBS	OBS Crossing S13
13:35	6116	OBS	OBS Crossing S12
16:15	6069	OBS	OBS Crossing S11
18:58	6021	LSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	6198	48° 10.8456'	128° 49.8101'
LGSP	6021	47° 30.9140'	128° 55.5269'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_03R.0.p190	MGL0910_03R.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	N/A	Gun string #1	good
		Gun string #2	in-op
		Gun string #3	in-op
		Gun string #4	good

Acoustic remarks:

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 420.0m recording length: N/Asec.

line status: Line Complete

Seq# 007

Line Name: MGL0910_02 **NAVIGATION** **DATE:** 2009-08-29

Line Brg : 5.5 ° **LINE LOGS** **JULIAN DAY:** 241

CLIENT: National Science Foundation **SURVEY: E-TOMO** **MGL0910**

DC SOL : 7.9m
DC EOL : 2.1m
SMG SOL: 4.3 knots
SMG EOL: 3.8 knots

WEATHER
WIND SOL: 14 knots
WIND EOL: 14 knots
SEAS SOL: 1.0m
SEAS EOL: 1.0m

DEPTH SOL : 2639.2m
DEPTH EOL : 2636.1m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
20:13	7018	FSP	Start of line
21:06	7033	OBS	Crossing OBS W1
21:24	7038	Shot	Missed shotpoint 7038 d/t Digishot malfunctio
22:31	7057	OBS	Crossing OBS W2
23:55	7081	LSP	Early EOL d/t string 1 failure, crossed OBS W:

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	7018	47° 30.0606'	128° 49.9828'
LGSP	7081	47° 44.2749'	128° 47.9696'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_02.0.p190	MGL0910_02.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	N/A	Gun string #1	good
		Gun string #2	in-op
		Gun string #3	in-op
		Gun string #4	good

Acoustic remarks:

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 420.0m recording length: N/Asec.

line status: Line Incomplete

Seq# 008

Line Name: MGL0910_02R
Line Brg : 5.5 °

NAVIGATION LINE LOGS

DATE: 2009-08-30
JULIAN DAY: 242

CLIENT: National Science Foundation
SURVEY: E-TOMO
MGL0910

DC SOL : 45.7m
DC EOL : 3.6m
SMG SOL: 4.0 knots
SMG EOL: 3.8 knots

WEATHER
WIND SOL: 14 knots
WIND EOL: 11.0 knots
SEAS SOL: 14.0m
SEAS EOL: 1-2m

DEPTH SOL : 2631.4m
DEPTH EOL : 2446.4m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
04:06	8035	FSP	Start of line
05:21	8057	OBS	Crossing OBS W2
06:42	8081	OBS	Crossing OBS W3
08:05	8104	OBS	Crossing OBS W4
09:28	8128	OBS	Crossing OBS W5
10:52	8152	OBS	Crossing OBS W6
12:14	8176	OBS	Crossing OBS W7
13:34	8200	OBS	Crossing OBS W8
14:52	8223	OBS	Crossing OBS W9
16:13	8247	OBS	Crossing OBS W10
16:54	8259	LSP/LGSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	8035	47° 33.8942'	128° 49.4102'
LGSP	8259	48° 24.4282'	128° 42.1672'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_02R.0.p190	MGL0910_02R.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	N/A	Gun string #1	good
		Gun string #2	in-op
		Gun string #3	in-op
		Gun string #4	good

Acoustic remarks:

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 420.0m recording length: N/Asec.

line status: Line Complete

Seq# 009

Line Name: MGL0910_07 **NAVIGATION** **DATE:** 2009-08-31

Line Brg : 197.6 ° **LINE LOGS** **JULIAN DAY:** 243

CLIENT: National Science Foundation **SURVEY: E-TOMO** **MGL0910**

DC SOL : -24.8m
DC EOL : -7.7m
SMG SOL: 4.6 knots
SMG EOL: 4.7 knots

WEATHER
WIND SOL: 15.4 knots
WIND EOL: 17.1 knots
SEAS SOL: 1.5m
SEAS EOL: 1-2m

DEPTH SOL : 2496.2m
DEPTH EOL : 2599.7m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
00:24	9163	FSP	Start of line
01:40	9138	OBS	Crossing OBS S36
02:29	9122	OBS	Crossing OBS S35
04:10	9089	OBS	Crossing OBS S33
05:54	9055	OBS	Crossing OBS S31
06:43	9039	OBS	Crossing OBS S30
07:35	9022	OBS	Crossing OBS S29
07:38	9021	LSP/LGSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	9163	48° 14.3603'	128° 49.4781'
LGSP	9021	47° 41.4882'	129° 04.9831'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_07.0.p190	MGL0910_07.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	N/A	Gun string #1	good
		Gun string #2	in-op
		Gun string #3	in-op
		Gun string #4	good

Acoustic remarks:

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 450.0m recording length: N/Asec.

line status: Line Complete

Seq# 010

Line Name: MGL0910_10 **NAVIGATION** **DATE:** 2009-08-31

Line Brg : 17.3 ° **LINE LOGS** **JULIAN DAY:** 243

CLIENT: National Science Foundation **SURVEY: E-TOMO** **MGL0910**

DC SOL : -230.4m
DC EOL : -184.6m
SMG SOL: 3.9 knots
SMG EOL: 4.8 knots

WEATHER
WIND SOL: 22.5 knots
WIND EOL: 24.6 knots
SEAS SOL: 1-2m
SEAS EOL: 1-2m

DEPTH SOL : 2592.3m
DEPTH EOL : 2616.9m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
08:17	10020	FSP	Start of line
08:30	10024	LSP	End of line – wrong coords on spectra

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	10020	47° 42.0184'	129° 07.3064'
LGSP	10024	47° 42.9939'	129° 06.8436'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_10.0.p190	MGL0910_10.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	N/A	Gun string #1	good
		Gun string #2	in-op
		Gun string #3	in-op
		Gun string #4	good

Acoustic remarks:

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 450.0m recording length: N/Asec.

line status: Line Incomplete

Seq# 011

Line Name: MGL0910_10A
Line Brg : 17.5 °

NAVIGATION LINE LOGS

DATE: 2009-08-31
JULIAN DAY: 243

CLIENT: National Science Foundation
SURVEY: E-TOMO
MGL0910

DC SOL : 2.1m
DC EOL : 25.5m
SMG SOL: 4.7 knots
SMG EOL: 4.4 knots

WEATHER
WIND SOL: 26.1 knots
WIND EOL: 18.7 knots
SEAS SOL: 1-2m
SEAS EOL: 2-3m

DEPTH SOL : 2630.8m
DEPTH EOL : 2481.7m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
08:37	11026	FSP	Start of line
15:21	11156	LSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	11026	47° 43.5248'	129° 06.5710'
LGSP	11156	48° 13.5126'	128° 52.4188'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_10A.0.p190	MGL0910_10A.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	N/A	Gun string #1	good
		Gun string #2	in-op
		Gun string #3	in-op
		Gun string #4	good

Acoustic remarks:

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 450.0m recording length: N/Asec.

line status: Line Complete

Seq# 012

Line Name: MGL0910_13 **NAVIGATION** **DATE:** 2009-08-31

Line Brg : 197.7 ° **LINE LOGS** **JULIAN DAY:** 243

CLIENT: National Science Foundation **SURVEY: E-TOMO** **MGL0910**

DC SOL : -8.3m
DC EOL : 4.0m
SMG SOL: 4.5 knots
SMG EOL: 4.5 knots

WEATHER
WIND SOL: 13.5 knots
WIND EOL: 16 knots
SEAS SOL: 1-2m
SEAS EOL: 1-2m

DEPTH SOL : 2499.9m
DEPTH EOL : 2517.2m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
15:59	12157	FSP	Start of line
23:02	12021	LSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	12157	48° 13.9389'	128° 54.7568'
LGSP	12021	47° 42.4560'	129° 09.6078'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_13.0.p190	MGL0910_13.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	N/A	Gun string #1	good
		Gun string #2	in-op
		Gun string #3	in-op
		Gun string #4	good

Acoustic remarks:

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 450.0m recording length: N/Asec.

line status: Line Complete

Seq# 013

Line Name: MGL0910_16 **NAVIGATION** **DATE:** 2009-09-01

Line Brg : 17.5 ° **LINE LOGS** **JULIAN DAY:** 244

CLIENT: National Science Foundation **SURVEY: E-TOMO** **MGL0910**

DC SOL : 1.5m
DC EOL : 1.4m
SMG SOL: 4.8 knots
SMG EOL: 4.7 knots

WEATHER
WIND SOL: 22.9 knots
WIND EOL: 22.7 knots
SEAS SOL: 1-2m
SEAS EOL: 1-2m

DEPTH SOL : 2592.7m
DEPTH EOL : 2706.7m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
01:08	13019	FSP	Start of line
01:41	13030	OBS	Crossing OBS S42
02:29	13046	OBS	Crossing OBS S43
03:12	13060	OBS	Crossing OBS S44
03:45	13071	OBS	Crossing OBS S45
04:19	13082	OBS	Crossing OBS S46
04:46	13094	OBS	Crossing OBS S47
05:30	13105	OBS	Crossing OBS S48
06:03	13116	OBS	Crossing OBS S49
06:46	13130	OBS	Crossing OBS S50
07:38	13147	OBS	Crossing OBS S51
08:06	13156	LSP/LGSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	13019	47° 42.7562'	129° 11.9887'
LGSP	13156	48° 14.4797'	128° 57.0683'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_13.0.p190	MGL0910_13.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	N/A	Gun string #1	good
		Gun string #2	in-op
		Gun string #3	in-op
		Gun string #4	good

Acoustic remarks:

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 450.0m recording length: N/Asec.

line status: Line Complete

Seq# 014

Line Name: MGL0910_23 **NAVIGATION** **DATE:** 2009-09-01

Line Brg : 197.6 ° **LINE LOGS** **JULIAN DAY:** 244

CLIENT: National Science Foundation **SURVEY: E-TOMO** **MGL0910**

DC SOL : 26.3m	DEPTH SOL : 2234.6m	NAVIGATION SYSTEM USED:C-Nav - Primary
DC EOL : -2.7m	DEPTH EOL : 2600.9m	NAVIGATION SYSTEM USED:SeaPath 200
SMG SOL: 3.4 knots	FEATHER SOL: N/A °	NAVIGATION SYSTEM USED:Posnet
SMG EOL: 4.7 knots	FEATHER EOL: N/A °	GRAVITY METER: BGM-3: used
WEATHER	MAX FEATHER: N/A °	MAGNETOMETER: GeoMetrics 882
WIND SOL: 14.3 knots		MAG DEC USED : 16.42°
WIND EOL: 5.9 knots		
SEAS SOL: 1-2m	19:00 – 07:00 utc => David Martinson, Ryan Eaton	
SEAS EOL: 1m	07:00 – 19:00 utc => Bern McKiernan, David Ng	

UTC	SP	EVENT	COMMENTS
10:41	14157	FSP	Start of line -- strings 1 and 2 only – volume 366
17:43	14021	LSP/LGSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	14157	48° 15.5766'	129° 02.4793'
LGSP	14021	47° 44.0841'	129° 17.2928'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_23.0.p190	MGL0910_23.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	N/A	Gun string #1	good
		Gun string #2	in-op
		Gun string #3	in-op
		Gun string #4	good

Acoustic remarks:

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 450.0m recording length: N/Asec.

line status: Line Complete

Seq# 015

Line Name: MGL0910_20 **NAVIGATION** **DATE:** 2009-09-01

Line Brg : 17.5 ° **LINE LOGS** **JULIAN DAY:** 244

CLIENT: National Science Foundation **SURVEY: E-TOMO** **MGL0910**

DC SOL : 21.1m
DC EOL : -9.4m
SMG SOL: 4.7 knots
SMG EOL: 4.9 knots

WEATHER
WIND SOL: 14.5 knots
WIND EOL: 10 knots
SEAS SOL: 1m
SEAS EOL: 1.0m

DEPTH SOL : 2562.4m
DEPTH EOL : 2649.7m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
18:26	15019	FSP	Start of line
20:51	15066	OBS	Crossing OBS S52
21:25	15077	OBS	Crossing OBS S53
23:06	15110	OBS	Crossing OBS S54
01:30	15156	LSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	15019	47° 43.4028'	129° 15.0586'
LGSP	15156	48° 15.1271'	129° 00.1403'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_20.0.p190	MGL0910_20.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	N/A	Gun string #1	good
		Gun string #2	in-op
		Gun string #3	in-op
		Gun string #4	good

Acoustic remarks:

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 450.0m recording length: N/Asec.

line status: Line Complete

Seq# 016

Line Name: MGL0910_17

Line Brg : 197 °

NAVIGATION

LINE LOGS

DATE: 2009-09-02

JULIAN DAY: 245

CLIENT: National Science Foundation

SURVEY: E-TOMO

MGL0910

DC SOL : 4.4m
DC EOL : -12.0m
SMG SOL: 4.6 knots
SMG EOL: 4.8 knots

WEATHER

WIND SOL: 5 knots
WIND EOL: 12.8 knots
SEAS SOL: 1-2m
SEAS EOL: 1m

DEPTH SOL : 2661.2m
DEPTH EOL : 2648.5m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
03:53	16157	FSP	Start of line
04:14	16150	FGSP	Spectra problems resolved. Shot positions for shots 16157-16151 are not correct. Timing is accurat
11:04	16021	LSP/LGSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	16157	48° 14.6820'	128° 57.7864'
LGSP	16021	47° 43.1089'	129° 12.6683'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_17.0.p190	MGL0910_17.0.p294

Posnet locations & remarks: good - none - intermittent

Acoustic remarks:

Tailbuoy #1	N/A	Gun string #1	good
		Gun string #2	in-op
		Gun string #3	in-op
		Gun string #4	good

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 450.0m recording length: N/Asec.

line status: Line Complete

Seq# 017

Line Name: MGL0910_25
Line Brg : 17.5 °

NAVIGATION LINE LOGS

DATE: 2009-09-02
JULIAN DAY: 245

CLIENT: National Science Foundation | SURVEY: E-TOMO | MGL0910

DC SOL : -0.5m
DC EOL : 0.9m
SMG SOL: 4.1 knots
SMG EOL: 4.7 knots
WEATHER
WIND SOL: 10.1 knots
WIND EOL: 13 knots
SEAS SOL: 0-1m
SEAS EOL: 1.0m

DEPTH SOL : 2732.5m
DEPTH EOL : 2022.5m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
12:20	17019	FSP	Start of line
12:20	17020	FGSP	First good shot point
19:34	17156	LSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	17020	47° 44.4454'	129° 18.8119'
LGSP	17156	48° 15.9340'	129° 03.9782'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_25.0.p190	MGL0910_25.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	N/A	Gun string #1	in-op
		Gun string #2	in-op
		Gun string #3	in-op
		Gun string #4	good

Acoustic remarks:

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 450.0m recording length: N/Asec.

line status: Line Complete

Seq# 018

Line Name: MGL0910_22 **NAVIGATION** **DATE:** 2009-09-02

Line Brg : 197 ° **LINE LOGS** **JULIAN DAY:** 245

CLIENT: National Science Foundation **SURVEY: E-TOMO** **MGL0910**

DC SOL : 21.2m	DEPTH SOL : 2255.9m	NAVIGATION SYSTEM USED: C-Nav - Primary
DC EOL : 10.0m	DEPTH EOL : 2645.8m	NAVIGATION SYSTEM USED: SeaPath 200
SMG SOL: 4.7 knots	FEATHER SOL: N/A °	NAVIGATION SYSTEM USED: Posnet
SMG EOL: 4.1 knots	FEATHER EOL: N/A °	GRAVITY METER: BGM-3: used
WEATHER	MAX FEATHER: N/A °	MAGNETOMETER: GeoMetrics 882
WIND SOL: 19 knots		MAG DEC USED : 16.42°
WIND EOL: 16 knots		
SEAS SOL: 1.0m	19:00 – 07:00 utc => David Martinson, Ryan Eaton	
SEAS EOL: 1.0m	07:00 – 19:00 utc => Bern McKiernan, David Ng	

UTC	SP	EVENT	COMMENTS
20:13	18158	FSP	Start of line
20:28	18153	OBS	Crossing OBS S64
03:33	18021	LSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	18158	48° 15.6448'	129° 01.5964'
LGSP	18021	47° 43.9237'	129° 16.5339'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_22.0.p190	MGL0910_22.0.p294

Posnet locations & remarks: good - none - intermittent

Acoustic remarks:

Tailbuoy #1	N/A	Gun string #1	in-op
		Gun string #2	in-op
		Gun string #3	in-op
		Gun string #4	good

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 450.0m recording length: N/Asec.

line status: Line Complete

Seq# 019

Line Name: MGL0910_19
Line Brg : 17.5 °

NAVIGATION LINE LOGS

DATE: 2009-09-03
JULIAN DAY: 246

CLIENT: National Science Foundation
SURVEY: E-TOMO
MGL0910

DC SOL : -38.6m
DC EOL : 21.5m
SMG SOL: 4.8 knots
SMG EOL: 4.5 knots

WEATHER
WIND SOL: 17 knots
WIND EOL: 4.2 knots
SEAS SOL: 1.0m
SEAS EOL: 0-1m

DEPTH SOL : 2644.0m
DEPTH EOL : 2676.8m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
04:41	19020	FSP	Start of line
11:24	19156	LSP/LGSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	19020	47° 43.4821'	129° 14.2267'
LGSP	19156	48° 14.9634'	128° 59.3640'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_19.0.p190	MGL0910_19.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	N/A	Gun string #1	in-op
		Gun string #2	good
		Gun string #3	good
		Gun string #4	good

Acoustic remarks:

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 450.0m recording length: N/Asec.

line status: Line Complete

Seq# 020

Line Name: MGL0910_24 **NAVIGATION** **DATE:** 2009-09-03

Line Brg : 197.6 ° **LINE LOGS** **JULIAN DAY:** 246

CLIENT: National Science Foundation **SURVEY: E-TOMO** **MGL0910**

DC SOL : -3.6m
DC EOL : 16.1m
SMG SOL: 4.8 knots
SMG EOL: 4.5 knots

WEATHER
WIND SOL: 11.2 knots
WIND EOL: 24 knots
SEAS SOL: 0-1m
SEAS EOL: 1.0m

DEPTH SOL : 2040.2m
DEPTH EOL : 2391.3m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
12:23	20157	FSP	Start of line
13:18	20139	OBS	OBS Crossing S63
14:10	20122	OBS	OBS Crossing S62
15:02	20105	OBS	OBS Crossing S61
15:52	20089	OBS	OBS Crossing W60
16:39	20072	OBS	OBS Crossing S59
17:30	20055	OBS	OBS Crossing W58
18:22	20038	OBS	OBS Crossing S57
19:16	20021	LSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	20157	48° 15.7345'	129° 03.2248'
LGSP	20021	47° 44.2490'	129° 18.0734'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_24.0.p190	MGL0910_24.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	N/A	Gun string #1	in-op
		Gun string #2	good
		Gun string #3	good
		Gun string #4	good

Acoustic remarks:

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 450.0m recording length: N/Asec.

line status: Line Complete

Seq# 021

Line Name: MGL0910_21 **NAVIGATION** **DATE:** 2009-09-03

Line Brg : 17.5 ° **LINE LOGS** **JULIAN DAY:** 246

CLIENT: National Science Foundation **SURVEY: E-TOMO** **MGL0910**

DC SOL : 80.3m	DEPTH SOL : 2625.3m	NAVIGATION SYSTEM USED: C-Nav - Primary
DC EOL : 2.6m	DEPTH EOL : 2526.9m	NAVIGATION SYSTEM USED: SeaPath 200
SMG SOL: 3.9 knots	FEATHER SOL: N/A °	NAVIGATION SYSTEM USED: Posnet
SMG EOL: 4.5 knots	FEATHER EOL: N/A °	GRAVITY METER: BGM-3: used
WEATHER	MAX FEATHER: N/A °	MAGNETOMETER: GeoMetrics 882
WIND SOL: 16 knots		MAG DEC USED : 16.42°
WIND EOL: 25 knots		
SEAS SOL: 1.0m	19:00 – 07:00 utc => David Martinson, Ryan Eaton	
SEAS EOL: 2.0m	07:00 – 19:00 utc => Bern McKiernan, David Ng	

UTC	SP	EVENT	COMMENTS
19:53	21020	FSP	Start of line
02:41	21156	LSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	21020	47° 43.7869'	129° 15.6759'
LGSP	21156	48° 15.2870'	129° 00.9006'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_21.0.p190	MGL0910_21.0.p294

Posnet locations & remarks: good - none - intermittent

Acoustic remarks:

Tailbuoy #1	N/A	Gun string #1	in-op
		Gun string #2	good
		Gun string #3	good
		Gun string #4	good

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 450.0m recording length: N/Asec.

line status: Line Complete

Seq# 022

Line Name: MGL0910_18 **NAVIGATION** **DATE:** 2009-09-04

Line Brg : 197 ° **LINE LOGS** **JULIAN DAY:** 247

CLIENT: National Science Foundation **SURVEY: E-TOMO** **MGL0910**

DC SOL : 43.5m	DEPTH SOL : 2709.7m	NAVIGATION SYSTEM USED: C-Nav - Primary
DC EOL : 5.7m	DEPTH EOL : 2725.8m	NAVIGATION SYSTEM USED: SeaPath 200
SMG SOL: 3.7 knots	FEATHER SOL: N/A °	NAVIGATION SYSTEM USED: Posnet
SMG EOL: 4.9 knots	FEATHER EOL: N/A °	GRAVITY METER: BGM-3: used
WEATHER	MAX FEATHER: N/A °	MAGNETOMETER: GeoMetrics 882
WIND SOL: 31 knots		MAG DEC USED : 16.42°
WIND EOL: 10.3 knots		
SEAS SOL: 2.0m	19:00 – 07:00 utc => David Martinson, Ryan Eaton	
SEAS EOL: 2-3m	07:00 – 19:00 utc => Bern McKiernan, David Ng	

UTC	SP	EVENT	COMMENTS
03:24	22159	FSP	Start of line
11:14	22022	LGSP	End of line
11:17	22021	LSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	22159	48° 15.2305'	128° 58.4286'
LGSP	22022	47° 43.5046'	129° 13.3412'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_18.0.p190	MGL0910_18.0.p294

Posnet locations & remarks: good - none - intermittent

Acoustic remarks:

Tailbuoy #1	N/A	Gun string #1	in-op
		Gun string #2	good
		Gun string #3	good
		Gun string #4	good

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 450.0m recording length: N/Asec.

line status: Line Complete

Seq# 023

Line Name: MGL0910_15
Line Brg : 17.5 °

NAVIGATION LINE LOGS

DATE: 2009-09-04
JULIAN DAY: 247

CLIENT: National Science Foundation | SURVEY: E-TOMO | MGL0910

DC SOL : 95.4m
DC EOL : 3.2m
SMG SOL: 4.5 knots
SMG EOL: 5.0 knots

WEATHER
WIND SOL: 7.6 knots
WIND EOL: 6.7 knots
SEAS SOL: 1-2m
SEAS EOL: 1-2m

DEPTH SOL : 2327.8m
DEPTH EOL : 2674.9m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
11:59	23019	FSP	Start of line
12:05	23021	FGSP	First good shot point
19:10	23156	LSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	23021	47° 43.0572'	129° 11.0033'
LGSP	23156	48° 14.3146'	128° 56.2867'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_15.0.p190	MGL0910_15.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	N/A	Gun string #1	in-op
		Gun string #2	good
		Gun string #3	good
		Gun string #4	good

Acoustic remarks:

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 450.0m recording length: N/Asec.

line status: Line Complete

Seq# 024

Line Name: MGL0910_12 **NAVIGATION** **DATE:** 2009-09-04

Line Brg : 197 ° **LINE LOGS** **JULIAN DAY:** 247

CLIENT: National Science Foundation **SURVEY: E-TOMO** **MGL0910**

DC SOL : 41.8m
DC EOL : -1.1m
SMG SOL: 4.2 knots
SMG EOL: knots

WEATHER
WIND SOL: 8.8 knots
WIND EOL: knots
SEAS SOL: 1-2m
SEAS EOL: 1-2m

DEPTH SOL : 2492.2m
DEPTH EOL : 2581.0m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
19:51	24158	FSP	Start of line
22:37	24111	OBS	Crossing OB S41
23:14	24100	OBS	Crossing OB S40
23:48	24090	OBS	Crossing OB S39
03:21	24021	LSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	24158	48° 14.0253'	128° 53.9245'
LGSP	24021	47° 42.3001'	129° 08.8323'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_12.0.p190	MGL0910_12.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	N/A	Gun string #1	in-op
		Gun string #2	good
		Gun string #3	good
		Gun string #4	good

Acoustic remarks:

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 450.0m recording length: N/Asec.

line status: Line Complete

Seq# 025

Line Name: MGL0910_09 **NAVIGATION** **DATE:** 2009-09-05

Line Brg : 17.5 ° **LINE LOGS** **JULIAN DAY:** 248

CLIENT: National Science Foundation **SURVEY: E-TOMO** **MGL0910**

DC SOL : 70.2m	DEPTH SOL : 2585.5m	NAVIGATION SYSTEM USED: C-Nav - Primary
DC EOL : 0.1m	DEPTH EOL : 2478.6m	NAVIGATION SYSTEM USED: SeaPath 200
SMG SOL: 4.4 knots	FEATHER SOL: N/A °	NAVIGATION SYSTEM USED: Posnet
SMG EOL: 4.6 knots	FEATHER EOL: N/A °	GRAVITY METER: BGM-3: used
WEATHER	MAX FEATHER: N/A °	MAGNETOMETER: GeoMetrics 882
WIND SOL: 5.3 knots		MAG DEC USED : 16.42°
WIND EOL: 5.7 knots		
SEAS SOL: 1-2m	19:00 – 07:00 utc => David Martinson, Ryan Eaton	
SEAS EOL: 1-2m	07:00 – 19:00 utc => Bern McKiernan, David Ng	

UTC	SP	EVENT	COMMENTS
04:05	25018	FSP	Start of line
11:11	25156	LSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	25018	47° 41.3754'	129° 06.6589'
LGSP	25156	48° 13.3393'	128° 51.6776'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_09.0.p190	MGL0910_09.0.p294

Posnet locations & remarks: good - none - intermittent

Acoustic remarks:

Tailbuoy #1	N/A	Gun string #1	in-op
		Gun string #2	good
		Gun string #3	good
		Gun string #4	good

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 450.0m recording length: N/Asec.

line status: Line Complete

Seq# 026

Line Name: MGL0910_14 **NAVIGATION** **DATE:** 2009-09-05

Line Brg : 197.6 ° **LINE LOGS** **JULIAN DAY:** 248

CLIENT: National Science Foundation **SURVEY: E-TOMO** **MGL0910**

DC SOL : -3.5m	DEPTH SOL : 2499.6m	NAVIGATION SYSTEM USED: C-Nav - Primary
DC EOL : -22.9m	DEPTH EOL : 2503.9m	NAVIGATION SYSTEM USED: SeaPath 200
SMG SOL: 3.8 knots	FEATHER SOL: N/A °	NAVIGATION SYSTEM USED: Posnet
SMG EOL: 4.6 knots	FEATHER EOL: N/A °	GRAVITY METER: BGM-3: used
WEATHER	MAX FEATHER: N/A °	MAGNETOMETER: GeoMetrics 882
WIND SOL: 14.1 knots		MAG DEC USED : 16.42°
WIND EOL: 25.1 knots		
SEAS SOL: 1-2m	19:00 – 07:00 utc => David Martinson, Ryan Eaton	
SEAS EOL: 1-2m	07:00 – 19:00 utc => Bern McKiernan, David Ng	

UTC	SP	EVENT	COMMENTS
12:47	26157	FSP	Start of line
15:27	26111		Estimate position main networl
20:01	26021	LSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	26152	48° 12.9538'	128° 56.0871'
LGSP	26021	47° 42.6212'	129° 10.3532'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_14.0.p190	MGL0910_14.0.p294

Posnet locations & remarks: good - none - intermittent

Acoustic remarks:

Tailbuoy #1	N/A	Gun string #1	in-op
		Gun string #2	good
		Gun string #3	good
		Gun string #4	good

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 450.0m recording length: N/Asec.

line status: Line Complete

Seq# 027

Line Name: MGL0910_11 **NAVIGATION** **DATE:** 2009-09-05

Line Brg : 17.5 ° **LINE LOGS** **JULIAN DAY:** 248

CLIENT: National Science Foundation **SURVEY: E-TOMO** **MGL0910**

DC SOL : 99.9m
DC EOL : 11.2m
SMG SOL: 4.1 knots
SMG EOL: 4.8 knots

WEATHER
WIND SOL: 15.4 knots
WIND EOL: 9.3 knots
SEAS SOL: 1-2m
SEAS EOL: 1-2m

DEPTH SOL : 2606.2m
DEPTH EOL : 2486.0m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
20:40	27019	FSP	Start of line
03:41	27156	LSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	27019	47° 41.9295'	129° 08.0732'
LGSP	27156	48° 13.6633'	128° 53.2059'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_11.0.p190	MGL0910_11.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	N/A	Gun string #1	in-op
		Gun string #2	good
		Gun string #3	good
		Gun string #4	good

Acoustic remarks:

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 450.0m recording length: N/Asec.

line status: Line Complete

Seq# 028

Line Name: MGL0910_08

Line Brg : 197 °

NAVIGATION

LINE LOGS

DATE: 2009-09-06

JULIAN DAY: 249

CLIENT: National Science Foundation

SURVEY: E-TOMO

MGL0910

DC SOL : -7.7m
DC EOL : 1.1m
SMG SOL: 4.0 knots
SMG EOL: 5.0 knots

WEATHER

WIND SOL: 16.9 knots
WIND EOL: 7.6 knots
SEAS SOL: 1-2m
SEAS EOL: 2-3m

DEPTH SOL : 2492.6m
DEPTH EOL : 2595.4m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
04:18	28159	FSP	Start of line
07:15	28105	OBS	OBS Crossing S34 (~500m away
11:33	28021	LSP/LGSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	28159	48° 13.6000'	128° 50.7008'
LGSP	28021	47° 41.6516'	129° 05.7587'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_08.0.p190	MGL0910_08.0.p294

Posnet locations & remarks: good - none - intermittent

Acoustic remarks:

Tailbuoy #1	N/A	Gun string #1	in-op
		Gun string #2	good
		Gun string #3	good
		Gun string #4	good

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 450.0m recording length: N/Asec.

line status: Line Complete

Seq# 029

Line Name: MGL0910_26 **NAVIGATION** **DATE:** 2009-09-06

Line Brg : 17.5 ° **LINE LOGS** **JULIAN DAY:** 249

CLIENT: National Science Foundation **SURVEY: E-TOMO** **MGL0910**

DC SOL : -3.6m
DC EOL : 3.7m
SMG SOL: 4.3 knots
SMG EOL: 4.7 knots

WEATHER
WIND SOL: 18.7 knots
WIND EOL: 17.1 knots
SEAS SOL: 2-3m
SEAS EOL: 2-3m

DEPTH SOL : 2536.4m
DEPTH EOL : 2336.6m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
15:02	29056	FSP	Start of line
17:59	29111	LSP/LGSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	29056	47° 50.5880'	129° 04.5065'
LGSP	29111	48° 03.3209'	128° 58.5073'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_26.0.p190	MGL0910_26.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	N/A	Gun string #1	in-op
		Gun string #2	good
		Gun string #3	good
		Gun string #4	good

Acoustic remarks:

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 450.0m recording length: N/Asec.

line status: Line Complete

Seq# 030

Line Name: MGL0910_29
Line Brg : 197.6 °

NAVIGATION LINE LOGS

DATE: 2009-09-06
JULIAN DAY: 249

CLIENT: National Science Foundation | SURVEY: E-TOMO | MGL0910

DC SOL : 31.4m
DC EOL : -15.1m
SMG SOL: 4.7 knots
SMG EOL: 4.1 knots

WEATHER
WIND SOL: 10.9 knots
WIND EOL: 20.1 knots
SEAS SOL: 2-3m
SEAS EOL: 2-3m

DEPTH SOL : 2337.9m
DEPTH EOL : 4234.3m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
18:40	30112	FSP	Start of line
21:08	30066	LSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	30112	48° 03.8457'	129° 00.8252'
LGSP	30066	47° 53.1883'	129° 05.8059'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_29.0.p190	MGL0910_29.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	N/A	Gun string #1	in-op
		Gun string #2	good
		Gun string #3	good
		Gun string #4	good

Acoustic remarks:

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 450.0m recording length: N/Asec.

line status: Line Complete

Seq# 031

Line Name: MGL0910_32
Line Brg : 17.5 °

NAVIGATION LINE LOGS

DATE: 2009-09-06
JULIAN DAY: 249

CLIENT: National Science Foundation | SURVEY: E-TOMO | MGL0910

DC SOL : 19.5m
DC EOL : 9.4m
SMG SOL: 5.1 knots
SMG EOL: 4.6 knots

WEATHER
WIND SOL: 22.3 knots
WIND EOL: 20.9 knots
SEAS SOL: 2-3m
SEAS EOL: 2-3m

DEPTH SOL : 2254.1m
DEPTH EOL : 2364.9m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
21:44	31065	FSP	Start of line
23:59	31111	LSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	31065	47° 53.6415'	129° 08.1244'
LGSP	31111	48° 04.2937'	129° 03.1155'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_32.0.p190	MGL0910_32.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	N/A	Gun string #1	in-op
		Gun string #2	good
		Gun string #3	good
		Gun string #4	good

Acoustic remarks:

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 450.0m recording length: N/Asec.

line status: Line Complete

Seq# 032

Line Name: MGL0910_35

Line Brg : 197 °

NAVIGATION LINE LOGS

DATE: 2009-09-07

JULIAN DAY: 250

CLIENT: National Science Foundation | SURVEY: E-TOMO | MGL0910

DC SOL : -89.4m
DC EOL : -12.7m
SMG SOL: 4.5 knots
SMG EOL: 4.8 knots

WEATHER
WIND SOL: 24.7 knots
WIND EOL: 25.5 knots
SEAS SOL: 2-3m
SEAS EOL: 2-3m

DEPTH SOL : 2522.2m
DEPTH EOL : 2507.2m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
00:39	32113	FSP	Start of line
03:05	32066	LSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	32113	48° 05.0315'	129° 05.2358'
LGSP	32066	47° 54.0623'	129° 10.4205'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_35.0.p190	MGL0910_35.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	N/A	Gun string #1	in-op
		Gun string #2	good
		Gun string #3	good
		Gun string #4	good

Acoustic remarks:

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 450.0m recording length: N/Asec.

line status: Line Complete

Seq# 033

Line Name: MGL0910_31
Line Brg : 17.5 °

NAVIGATION LINE LOGS

DATE: 2009-09-07
JULIAN DAY: 250

CLIENT: National Science Foundation | SURVEY: E-TOMO | MGL0910

DC SOL : 19.2m
DC EOL : -11.7m
SMG SOL: 4.1 knots
SMG EOL: 4.0 knots

WEATHER
WIND SOL: 24.7 knots
WIND EOL: 16.0 knots
SEAS SOL: 2-3m
SEAS EOL: 2-3m

DEPTH SOL : 2352.6m
DEPTH EOL : 2434.0m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
03:52	33064	FSP	Start of line
06:32	33111	LSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	33064	47° 53.2482'	129° 07.4642'
LGSP	33111	48° 04.1349'	129° 02.3630'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_31.0.p190	MGL0910_31.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	N/A	Gun string #1	in-op
		Gun string #2	good
		Gun string #3	good
		Gun string #4	good

Acoustic remarks:

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 450.0m recording length: N/Asec.

line status: Line Complete

Seq# 034

Line Name: MGL0910_28

Line Brg : 197.6 °

NAVIGATION

LINE LOGS

DATE: 2009-09-07

JULIAN DAY: 250

CLIENT: National Science Foundation

SURVEY: E-TOMO

MGL0910

DC SOL : 1.9m
DC EOL : -4.0m
SMG SOL: 4.4 knots
SMG EOL: 5.0 knots

WEATHER

WIND SOL: 15 knots
WIND EOL: 18.1 knots
SEAS SOL: 1-2m
SEAS EOL: 1-2m

DEPTH SOL : 2250.0m
DEPTH EOL : 2399.1m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
07:12	34112	FSP	Start of line
07:15	34111	FGPS	First good shot point
09:30	34066	LSP/LGSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	34111	48° 03.4476'	129° 00.0338'
LGSP	34066	47° 53.0278'	129° 05.0456'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_28.0.p190	MGL0910_28.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	N/A	Gun string #1	in-op
		Gun string #2	good
		Gun string #3	good
		Gun string #4	good

Acoustic remarks:

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 450.0m recording length: N/Asec.

line status: Line Complete

Seq# 035

Line Name: MGL0910_33

Line Brg : 17.5 °

NAVIGATION

LINE LOGS

DATE: 2009-09-07

JULIAN DAY: 250

CLIENT: National Science Foundation

SURVEY: E-TOMO

MGL0910

DC SOL : -62.4m
DC EOL : -1.6m
SMG SOL: 4.0 knots
SMG EOL: 5.1 knots

WEATHER

WIND SOL: 12.4 knots
WIND EOL: 20.2 knots
SEAS SOL: 1-2m
SEAS EOL: 1-2m

DEPTH SOL : 2179.2m
DEPTH EOL : 2478.8m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
10:17	35065	FSP	Start of line
12:31	35111	LSP/LGSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	35065	47° 53.8174'	129° 08.9556'
LGSP	35111	48° 04.4578'	129° 03.8928'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_33.0.p190	MGL0910_33.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	N/A	Gun string #1	in-op
		Gun string #2	good
		Gun string #3	good
		Gun string #4	good

Acoustic remarks:

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 450.0m recording length: N/Asec.

line status: Line Complete

Seq# 036

Line Name: MGL0910_27
Line Brg : 197.6 °

NAVIGATION LINE LOGS

DATE: 2009-09-07
JULIAN DAY: 250

CLIENT: National Science Foundation | SURVEY: E-TOMO | MGL0910

DC SOL : -18.1m
DC EOL : -17.5m
SMG SOL: 3.9 knots
SMG EOL: 4.4 knots

WEATHER
WIND SOL: 18.1 knots
WIND EOL: 10.7 knots
SEAS SOL: 1-2m
SEAS EOL: 1-2m

DEPTH SOL : 2342.6m
DEPTH EOL : 2282.5m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
13:33	36114	FSP	Start of line
16:11	36067	LGSP	Last good shot poin
16:14	36066	LSP	Last shot point

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	36114	48° 03.9760'	128° 59.0308'
LGSP	36067	47° 53.0946'	129° 04.1572'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_27.0.p190	MGL0910_27.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	N/A	Gun string #1	in-op
		Gun string #2	good
		Gun string #3	good
		Gun string #4	good

Acoustic remarks:

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 450.0m recording length: N/Asec.

line status: Line Complete

Seq# 037

Line Name: MGL0910_30 **NAVIGATION** **DATE:** 2009-09-07

Line Brg : 17.5 ° **LINE LOGS** **JULIAN DAY:** 250

CLIENT: National Science Foundation **SURVEY: E-TOMO** **MGL0910**

DC SOL : -277.9m	DEPTH SOL : 2342.5m	NAVIGATION SYSTEM USED: C-Nav - Primary
DC EOL : 8.0m	DEPTH EOL : 2382.7m	NAVIGATION SYSTEM USED: SeaPath 200
SMG SOL: 4.5 knots	FEATHER SOL: N/A °	NAVIGATION SYSTEM USED: Posnet
SMG EOL: 4.6 knots	FEATHER EOL: N/A °	GRAVITY METER: BGM-3: used
WEATHER	MAX FEATHER: N/A °	MAGNETOMETER: GeoMetrics 882
WIND SOL: 5.7 knots		MAG DEC USED : 16.42°
WIND EOL: 9.5 knots		
SEAS SOL: 0-1m	19:00 – 07:00 utc => David Martinson, Ryan Eaton	
SEAS EOL: 0-1m	07:00 – 19:00 utc => Bern McKiernan, David Ng	

UTC	SP	EVENT	COMMENTS
16:57	37065	FSP	Start of line (~300m away from line
19:27	37111	LSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	37065	47° 53.3655'	129° 06.8142'
LGSP	37111	48° 03.9696'	129° 01.5790'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_30.0.p190	MGL0910_30.0.p294

Posnet locations & remarks: good - none - intermittent

Acoustic remarks:

Tailbuoy #1	N/A	Gun string #1	in-op
		Gun string #2	good
		Gun string #3	good
		Gun string #4	good

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 450.0m recording length: N/Asec.

line status: Line Complete

Seq# 038

Line Name: MGL0910_34

Line Brg : 197 °

NAVIGATION

LINE LOGS

DATE: 2009-09-07

JULIAN DAY: 250

CLIENT: National Science Foundation

SURVEY: E-TOMO

MGL0910

DC SOL : -73.3m
DC EOL : -3.4m
SMG SOL: 3.9 knots
SMG EOL: 4.9 knots

WEATHER

WIND SOL: 11.4 knots
WIND EOL: 10.3 knots
SEAS SOL: 1-2m
SEAS EOL: 1-2m

DEPTH SOL : 2503.8m
DEPTH EOL : 2370.6m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
20:08	38112	FSP	Start of line (~300m away from line
22:24	38066	LSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	38112	48° 04.6401'	129° 04.5888'
LGSP	38066	47° 54.0013'	129° 09.6589'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_34.0.p190	MGL0910_34.0.p294

Posnet locations & remarks: good - none - intermittent

Acoustic remarks:

Tailbuoy #1	N/A	Gun string #1	in-op
		Gun string #2	good
		Gun string #3	good
		Gun string #4	good

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 450.0m recording length: N/Asec.

line status: Complete

Seq# 039

Line Name: MGL0910_02A **Line Brg :** 5.5 °

NAVIGATION LINE LOGS

DATE: 2009-09-08 **JULIAN DAY:** 251

CLIENT: National Science Foundation **SURVEY: E-TOMO** **MGL0910**

DC SOL : 80.3m
DC EOL : -1.1m
SMG SOL: 4.3 knots
SMG EOL: 4.0 knots
WEATHER
WIND SOL: 6.9 knots
WIND EOL: 28.2 knots
SEAS SOL: 1-2m
SEAS EOL: 1-2m

DEPTH SOL : 2635.5m
DEPTH EOL : 2446.0m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
04:52	39019	FSP	Start of line
05:37	39033	OBS	Crossing OBS W1
06:55	39057	OBS	Crossing OBS W2
08:13	39080	OBS	Crossing OBS W3
09:36	39104	OBS	Crossing OBS W4
11:01	39128	OBS	Crossing OBS W5
12:25	39152	OBS	Crossing OBS W6
13:47	39176	OBS	Crossing OBS W7
15:11	39200	OBS	Crossing OBS W8
16:31	39223	OBS	Crossing OBS W9
17:55	39247	OBS	Crossing OBS W10
18:36	39259	LSP/LGSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	39019	47° 30.2827'	128° 49.8395'
LGSP	39259	48° 24.4283'	128° 42.1710'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_02A.0.p190	MGL0910_02A.0.p294

Posnet locations & remarks: good - none - intermittent

Acoustic remarks:

Tailbuoy #1	N/A	Gun string #1	in-op
		Gun string #2	good
		Gun string #3	in-op
		Gun string #4	good

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 420.0m recording length: N/Asec.

line status: Line Complete

Seq# 040

Line Name: MGL0910_01 **NAVIGATION** **DATE:** 2009-09-08

Line Brg : 185.6 ° **LINE LOGS** **JULIAN DAY:** 251

CLIENT: National Science Foundation **SURVEY: E-TOMO** **MGL0910**

DC SOL : 16.8m	DEPTH SOL : 2415.3m	NAVIGATION SYSTEM USED: C-Nav - Primary
DC EOL : 292.0m	DEPTH EOL : 2677.9m	NAVIGATION SYSTEM USED: SeaPath 200
SMG SOL: 3.8 knots	FEATHER SOL: N/A °	NAVIGATION SYSTEM USED: Posnet
SMG EOL: 4.3 knots	FEATHER EOL: N/A °	GRAVITY METER: BGM-3: used
WEATHER	MAX FEATHER: N/A °	MAGNETOMETER: GeoMetrics 882
WIND SOL: 30.8 knots		MAG DEC USED : 16.42°
WIND EOL: 30.3 knots		
SEAS SOL: 2.0m	19:00 – 07:00 utc => David Martinson, Ryan Eaton	
SEAS EOL: 2-3m	07:00 – 19:00 utc => Bern McKiernan, David Ng	

UTC	SP	EVENT	COMMENTS
20:12	40221	FSP	Start of line – time OK, no shot number, no positior
20:16	40220	FGSP	Spectra operating nominally
00:30	40163		Spectra position jump – heavy weathe
09:09	40023	LSP/LGSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	40220	48° 23.6070'	128° 36.6342'
LGSP	40023	47° 30.7215'	128° 44.4615'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_01.0.p190	MGL0910_01.0.p294

Posnet locations & remarks: good - none - intermittent

Acoustic remarks:

Tailbuoy #1	N/A	Gun string #1	in-op
		Gun string #2	good
		Gun string #3	in-op
		Gun string #4	good

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 500.0m recording length: N/Asec.

line status: Line Complete

Seq# 041

Line Name: MGL0910_39 **NAVIGATION** **DATE:** 2009-09-09

Line Brg : 275.7 ° **LINE LOGS** **JULIAN DAY:** 252

CLIENT: National Science Foundation **SURVEY: E-TOMO** **MGL0910**

DC SOL : 136.7m
DC EOL : -48.1m
SMG SOL: 4.9 knots
SMG EOL: 4.2 knots

WEATHER
WIND SOL: 28.4 knots
WIND EOL: 22.8 knots
SEAS SOL: 2-3m
SEAS EOL: 2-3m

DEPTH SOL : 2677.3m
DEPTH EOL : 2747.4m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
09:18	41023	FSP	Start of line
15:33	41128	LSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	41023	47° 30.4095'	128° 45.2257'
LGSP	41128	47° 33.0085'	129° 26.8818'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_39.0.p190	MGL0910_39.0.p294

Posnet locations & remarks: good - none - intermittent

Acoustic remarks:

Tailbuoy #1	N/A	Gun string #1	in-op
		Gun string #2	good
		Gun string #3	in-op
		Gun string #4	good

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 500.0m recording length: N/Asec.

line status: Line Complete

Seq# 042

Line Name: MGL0910_05A **Line Brg :** 5.5 °

NAVIGATION LINE LOGS

DATE: 2009-09-09 **JULIAN DAY:** 252

CLIENT: National Science Foundation **SURVEY: E-TOMO** **MGL0910**

DC SOL : -14.5m
DC EOL : 3.2m
SMG SOL: 4.3 knots
SMG EOL: 3.8 knots

WEATHER
WIND SOL: 11.4 knots
WIND EOL: 12.8 knots
SEAS SOL: 1-2m
SEAS EOL: 1-2m

DEPTH SOL : 2776.7m
DEPTH EOL : 2520.7m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
18:32	42013	FSP	Start of line
18:41	42016	FGSP	First good shot point
19:31	42032	OBS	Crossing OBS W19
20:32	42051	OBS	Crossing OBS W20
22:04	42080	OBS	Crossing OBS W21
23:28	42104	OBS	Crossing OBS W22
00:51	42128	OBS	Crossing OBS W23
02:11	42151	OBS	Crossing OBS W24
03:35	42175	OBS	Crossing OBS W25
04:59	42199	OBS	Crossing OBS W26
06:00	42216	SHOTERROR	Shot 42217missing d/t wp change to correct line shotpoint spacin
06:19	42219	OBS	Crossing OBS W27
08:33	42260	OBS	Crossing OBS W28
08:33	42260	LSP/LGSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	42016	47° 32.1195'	129° 26.9532'
LGSP	42260	48° 25.9868'	129° 15.1072'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_05A.0.p190	MGL0910_05A.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	N/A	Gun string #1	good
		Gun string #2	good
		Gun string #3	in-op
		Gun string #4	good

Acoustic remarks:

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 420.0m recording length: N/Asec.

line status: Line Complete

Seq# 043

Line Name: MGL0910_06
Line Brg : 185.6 °

NAVIGATION
LINE LOGS

DATE: 2009-09-10
JULIAN DAY: 253

CLIENT: National Science Foundation | SURVEY: E-TOMO | MGL0910

DC SOL : -40.9m
DC EOL : 6.8m
SMG SOL: 4.8 knots
SMG EOL: 4.6 knots

WEATHER
WIND SOL: 21.1 knots
WIND EOL: 20.4 knots
SEAS SOL: 1-2m
SEAS EOL: 1-2m

DEPTH SOL : 2494.0m
DEPTH EOL : 2774.7m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
10:36	43229	FSP	Start of line
22:32	43021	LSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	43229	48° 29.1311'	129° 24.3803'
LGSP	43021	47° 33.2755'	129° 32.4546'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_06.0.p190	MGL0910_06.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	N/A	Gun string #1	good
		Gun string #2	good
		Gun string #3	in-op
		Gun string #4	good

Acoustic remarks:

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 500.0m recording length: N/Asec.

line status: Line Complete

Seq# 044

Line Name: MGL0910_40
Line Brg : 36 °

NAVIGATION LINE LOGS

DATE: 2009-09-10
JULIAN DAY: 253

CLIENT: National Science Foundation | SURVEY: E-TOMO | MGL0910

DC SOL : -5.2m
DC EOL : 7.4m
SMG SOL: 4.9 knots
SMG EOL: 4.8 knots

WEATHER
WIND SOL: 10.1 knots
WIND EOL: 6.9 knots
SEAS SOL: 1-2m
SEAS EOL: 1-2m

DEPTH SOL : 2770.3m
DEPTH EOL : 2547.4m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
23:14	44022	FSP	Start of line
23:52	44035	OBS	Crossing OBS W16
01:58	44077	LSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	44021	47° 33.2228'	129° 29.1469'
LGSP	44077	47° 44.0257'	129° 17.5249'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_40.0.p190	MGL0910_40.0.p294

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	N/A	Gun string #1	good
		Gun string #2	good
		Gun string #3	in-op
		Gun string #4	good

Acoustic remarks:

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 500.0m recording length: N/Asec.

line status: Line Complete

Seq# 045

Line Name: MGL0910_23R

Line Brg : 17.5 °

NAVIGATION

LINE LOGS

DATE: 2009-09-11

JULIAN DAY: 254

CLIENT: National Science Foundation

SURVEY: E-TOMO

MGL0910

DC SOL : -63.2m
DC EOL : 6.3m
SMG SOL: 4.9 knots
SMG EOL: 4.9 knots

WEATHER

WIND SOL: 6.9 knots
WIND EOL: 5.3 knots
SEAS SOL: 1-2m
SEAS EOL: 2-3m

DEPTH SOL : 2547.4m
DEPTH EOL : 2269.4m
FEATHER SOL: N/A °
FEATHER EOL: N/A °
MAX FEATHER: N/A °

19:00 – 07:00 utc => David Martinson, Ryan Eaton
07:00 – 19:00 utc => Bern McKiernan, David Ng

NAVIGATION SYSTEM USED: C-Nav - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: Posnet
GRAVITY METER: BGM-3: used
MAGNETOMETER: GeoMetrics 882
MAG DEC USED : 16.42°

UTC	SP	EVENT	COMMENTS
02:02	45021	FSP	Start of line
11:04	45196	LSP	End of line

VESSEL POSITION

	SP	Latitude (N)	Longitude (W)
FGSP	45021	47° 44.3653'	129° 17.2169'
LGSP	45196	48° 24.8645'	128° 58.0143'

NAVIGATION OFFSET APPLIED

NRP - Stern	4.20m
NRP - COS	193.70m
NRP – CNG	N/A
COS – CNG	N/A
NRP – CMP	N/A

Note: LMN line parameter set to great circle line.

P1	P2
MGL0910_23R.0.p190	MGL0910_23R.0.p294

Posnet locations & remarks: good - none - intermittent

Acoustic remarks:

Tailbuoy #1	N/A	Gun string #1	good
		Gun string #2	good
		Gun string #3	in-op
		Gun string #4	good

ToomeyV1.LMN source_8m.SCN Langseth.RTCN

SP spacing: 500.0m recording length: N/Asec.

line status: Line Complete