

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton - 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	1	9	FGSP	768
SP #	768	3341	LGSP	3341

Line	MGL11061004
Sequence	001
Direction	25.9

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	9s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	04/12/11	04/12/11
Time UTC	1306	2051
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	3.3	6 SW
Sea State (ft)	3	2-3
Water Depth (m)	2418	91.8

Cable	Erased Channels	Noisy/Weak Channels
1		
2		
3		
4		

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments	
SOL SP 1	
EOL SP 3341	
SOL Noisy Channels	
Streamer 1: 97, 100, 138, 141, 144, 157,197, 198, 203, 233, 325, 328, 329, 330, 342, 344, 359, 429, 444, 462	
Streamer 2: 46, 65, 100, 192, 193, 196, 203, 242, 284, 320, 354, 375, 378, 379, 387, 451 - 455, 460, 462, 468	
Streamer 3: 94, 95, 104, 107, 111, 113, 114, 135, 184, 190, 205, 272, 313, 438	
Streamer 4: 24, 80, 186, 188, 190, 192, 239, 243, 327, 367, 456	
EOL Noisy Channels	
S1: 97, 100, 141, 144 ,157, 197, 198, 203, 325, 328, 329, 330, 342, 344, 359, 383, 421, 424, 426,444, 462	
S2: 46, 65, 100,193, 196, 203, 345, 373, 385, 387, 451, 452, 453, 459, 460, 462 - 468	
S3: 95, 104, 108, 114, 133, 190, 205, 272, 313, 316, 453, 463, 464	
S4: 60, 186, 188, 190, 192, 239, 245, 327, 461 - 468	

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	10	20	FGSP	3393
SP #	3417	873	LGSP	873

Line	MGL11061156
Sequence	002
Direction	205

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	9s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/12/11	4/12/11
Time UTC	22:31	06:22
Volume (cu in.)	3300/3180	3300/3180
Wind (kts)	10 sw	7.2
Sea State (ft)	2-3	1-3
Water Depth (m)	75	2320

Cable	Erased Channels	Noisy/Weak Channels
1		
2		
3		
4		

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP
EOL SP
SOL NOISY CHANNELS
S1: 97, 100, 141, 144, 157, 197, 198, 203, 325, 328, 329, 330, 342, 344, 359, 383, 421, 424, 426,444, 462
S2: 46, 65, 100,193, 196, 203, 345, 373, 385, 387, 451, 452, 453, 459, 460, 462 - 468
S3: 95, 104, 108, 114, 133, 190, 205, 272, 313, 316, 453, 463, 464
S4: 60, 186, 188, 190, 192, 239, 245, 327, 461 - 468
EOL NOISY CHANNELS
S1: 97, 100, 141, 144, 197, 198, 203, 233, 291, 292, 325, 329, 330, 342, 344, 359, 429, 444, 462
S2: 65, 165, 193, 196, 203, 354, 373, 387, 413, 451, 452, 453, 460, 468
S3: 95, 96, 104, 107, 108, 111, 114, 135, 205, 272, 313, 316
S4: 80, 186, 188, 190, 192, 239, 243, 327, 456, 464, 465, 468

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	21	29	FGSP	763
SP #	763	3347	LGSP	2810

Line	MGL11061012
Sequence	003
Direction	25

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	9s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/13/11	4/13/11
Time UTC	07:38	1531
Volume (cu in.)	3300/3180	40/40
Wind (kts)	4.8	5.1 NW
Sea State (ft)	1-3	0-1
Water Depth (m)	2433	97

Cable	Erased Channels	Noisy/Weak Channels
1		
2		
3		
4		

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments				
SOL SP	S2G07 secured due to failure on MGL11061156 SEQ 002. STBD SOURCE 3180 CUBIC INCH			
EOL SP	SP 2811 Turtle mitigation interrupts the rest of the line.			
SOL NOISY CHANNELS				
S1:	97, 100, 141, 144, 197, 198, 203, 233, 291, 292, 325, 329, 330, 342, 344, 359, 429, 444, 462			
S2:	65, 165, 193, 196, 203, 354, 373, 387, 413, 451, 452, 453, 460, 468			
S3:	95, 96, 104, 107, 108, 111, 114, 135, 205, 272, 313, 316			
S4:	80, 186, 188, 190, 192, 239, 243, 327, 456, 464, 465, 468			
EOL NOISY CHANNELS				
S1:	97, 141, 144, 197, 198, 203, 233, 318, 325, 329, 330, 342, 359, 383, 429, 441, 444, 462			
S2:	65, 100, 193, 196, 203, 354, 373, 387, 452, 460, 466, 468			
S3:	95, 96, 104, 107, 108, 111, 114, 135, 205, 316			
S4:	80, 186, 188, 190, 192, 239, 243, 327, 456, 462			

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	30	38	FGSP	3212
SP #	3339	883	LGSP	883

Line	MGL11061164
Sequence	004
Direction	205

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	9s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/13/11	04/14/11
Time UTC	17:17	00:47
Volume (cu in.)	Ramp Up	3300/3180
Wind (kts)	Calm	CALM
Sea State (ft)	1-3	CALM
Water Depth (m)	69	2332

Cable	Erased Channels	Noisy/Weak Channels
1		
2		
3		
4		

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 3339 S2G07 secured due to failure on MGL11061156 SEQ 002. STBD SOURCE 3180 CUBIC INCH
EOL SP
SOL NOISY CHANNELS
S1: 97, 100, 141, 144, 197, 198, 203, 233, 291, 292, 325, 329, 330, 342, 344, 359, 429, 444, 462
S2: 65, 165, 193, 196, 203, 354, 373, 387, 413, 451, 452, 453, 460, 468
S3: 95, 96, 104, 107, 108, 111, 114, 135, 205, 272, 313, 316
S4: 80, 186, 188, 190, 192, 239, 243, 327, 456, 464, 465, 468
EOL NOISY CHANNELS
S1: 97, 100, 138, 141, 144, 197, 198, 203, 233, 291, 292, 325, 328, 329, 330, 342, 344, 359, 383, 421, 429, 444, 462
S2: 65, 193, 196, 203, 279, 354, 373, 387, 413, 423, 452, 460, 467, 468
S3: 447
S4: 80, 186, 188, 190, 192, 239, 243, 327, 468

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton - 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	39	47	FGSP	893
SP #	893	3351	LGSP	3351

Line	MGL11061020
Sequence	005
Direction	25

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	9s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	04/14/11	4/14/11
Time UTC	02:27	09:52
Volume (cu in.)	3180/3300	3180/3300
Wind (kts)	calm	4 nw
Sea State (ft)	calm	1
Water Depth (m)	2448	95

Cable	Erased Channels	Noisy/Weak Channels
1		
2		
3		
4		

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 893 S2G07 secured due to failure on MGL11061156 SEQ 002. STBD SOURCE 3180 CUBIC INCH
EOL SP
SOL NOISY CHANNELS
S1: 97, 100, 138, 141, 144, 197, 198, 203, 233, 291, 292, 325, 328, 329, 330, 342, 344, 359, 383, 421, 429, 444, 462
S2: 65, 193, 196, 203, 279, 354, 373, 387, 413, 423, 452, 460, 467, 468
S3: 447
S4: 80, 186, 188, 190, 192, 239, 243, 327, 468
EOL NOISY CHANNELS
S1: 97, 138, 141, 144, 197, 198, 203, 233, 325, 328, 329, 330, 342, 344, 359, 380, 383, 429, 441, 444, 462, 463, 465, 466, 467, 468
S2: 46, 65, 100, 193, 196, 203, 313, 354, 373, 386, 387, 450, 451, 452, 453, 454, 455, 457, 459, 460, 462, 463, 464, 465, 466, 467, 468
S3: 95, 96, 97, 98, 104, 106, 107, 108, 111, 114, 135, 190, 205, 272, 453, 456, 458, 459, 461, 462, 464
S4: 80, 186, 188, 190, 192, 239, 243, 268, 327, 383, 456, 461, 462, 463, 464, 465, 466, 467, 468

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

	SOL	EOL		
Tape #	48	56	FGSP	3377
SP #	3377	873	LGSP	873

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	420	420	420	420
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	04/14/2011	04/14/2011
Time UTC	11:38	19:46
Volume (cu in.)	3180/3300	3180/3300
Wind (kts)	10N	7SW
Sea State (ft)	2	2-3
Water Depth (m)	73	2314

Cable	Erased Channels	Noisy/Weak Channels
1		
2		
3		
4		

ProMax - QC the above channels

General / Line Comments
SOL S2G07 secured due to failure on MGL11061156 SEQ 002. STBD SOURCE 3180 CUBIC INCH
EOL S2G07 secured due to failure on MGL11061156 SEQ 002. STBD SOURCE 3180 CUBIC INCH
SOL NOISY CHANNELS
S1: 97, 138, 141, 144, 197, 198, 203, 233, 325, 328, 329, 330, 342, 344, 359, 380, 383, 429, 441, 444, 462, 463, 465, 466, 467, 468
S2: 46, 65, 100, 193, 196, 203, 313, 354, 373, 386, 387, 450, 451, 452, 453, 454, 455, 457, 459, 460, 462, 463, 464, 465, 466, 467, 468
S3: 95, 96, 97, 98, 104, 106, 107, 108, 111, 114, 135, 190, 205, 272, 453, 456, 458, 459, 461, 462, 464
S4: 80, 186, 188, 190, 192, 239, 243, 268, 327, 383, 456, 461, 462, 463, 464, 465, 466, 467, 468
EOL NOISY CHANNELS
S1: 97, 141, 144, 197, 198, 203, 325, 328, 329, 330, 359, 421, 423, 429, 444, 462
S2: 46, 65, 100, 193, 196, 203, 313, 354, 373, 375, 387, 413M 450, 451, 452, 453, 460
S3: 95, 96, 97, 98, 104, 107, 108, 114, 135, 205, 316, 370
S4: 80, 186, 188, 190, 192, 239, 243, 321, 456, 462

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton - 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

Line	MGL11061172
Sequence	006
Direction	205

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	9s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton - 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	57	65	FGSP	881
SP #	881	3351	LGSP	3351

Line	MGL11061028
Sequence	007
Direction	259

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	420	420	420	420
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	9s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	04/14/2011	04/15/2011
Time UTC	22:09	05:37
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	Calm	calm
Sea State (ft)	1-3	1-2
Water Depth (m)	2477	90.9

Cable	Erased Channels	Noisy/Weak Channels
1		
2		
3		
4		

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 881
EOL SP 3351
SOL NOISY CHANNELS
S1: 97, 141, 144, 197, 198, 203, 325, 328, 329, 330, 359, 421, 423, 429, 444, 462
S2: 46, 65, 100, 193, 196, 203, 313, 354, 373, 375, 387, 413M 450, 451, 452, 453, 460
S3: 95, 96, 97, 98, 104, 107, 108, 114, 135, 205, 316, 370
S4: 80, 186, 188, 190, 192, 239, 243, 321, 456, 462
EOL NOISY CHANNELS
S1: 97, 100, 141, 197, 198, 203, 233, 325, 328, 329, 330, 342, 359, 429, 441, 444, 462, 465, 466
S2: 46, 65, 100, 193, 196, 203, 354, 371, 373, 387, 413, 452, 460, 462, 466, 467, 468
S3: 95, 96, 97, 98, 104, 107, 108, 114, 135, 205, 316, 370
S4: 80, 186, 188, 190, 192, 239, 243, 321, 456, 462

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

	SOL	EOL		
Tape #	66	74	FGSP	3407
SP #	3407	873	LGSP	873

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	420	420	420	420
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/15/11	4/15/11
Time UTC	07:13	15:04
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	Calm	1.5 W
Sea State (ft)	1-3	1-3
Water Depth (m)	78	2300

Cable	Erased Channels	Noisy/Weak Channels
1		
2		
3		
4		

ProMax - QC the above channels

General / Line Comments	
SOL	SP 3407
EOL	SP 873
SOL NOISY CHANNELS	
S1:	97, 100, 141, 197, 198, 203, 233, 325, 328, 329, 330, 342, 359, 429, 441, 444, 462, 465, 466
S2:	46, 65, 100, 193, 196, 203, 354, 371, 373, 387, 413, 452, 460, 462, 466, 467, 468
S3:	95, 96, 97, 98, 104, 107, 108, 114, 135, 205, 316, 370
S4:	80, 186, 188, 190, 192, 239, 243, 321, 456, 462
EOL NOISY CHANNELS	
S1:	97, 141, 197, 198, 203, 233, 325, 328, 329, 330, 359, 421, 423, 429, 444, 462
S2:	46, 65, 100, 193, 196, 203, 244, 313, 354, 373, 375, 378, 387, 413, 450, 452, 453, 460, 468
S3:	95, 96, 97, 98, 104, 106, 107, 108, 111, 114, 135, 184, 190, 205, 313, 316, 366, 369, 370, 437, 438
S4:	80, 118, 186, 188, 190, 192, 239, 243, 327

Chief Science Officer	Robert Steinhaus		
Science Officer	Anthony Johnson	David Martinson	
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton - 12:00-24:00	
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00	

Line	MGL11061180
Sequence	008
Direction	205

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	9s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
	N.T.B.P. - Not To Be Processed

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton - 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	75	83	FGSP	915
SP #	915	3351	LGSP	3351

Line	MGL1106_1036
Sequence	009
Direction	25

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	420	420	420	420
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	9s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/15/11	04/16/11
Time UTC	20:20	03:45
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	SW 4	NNE 3
Sea State (ft)	2	1-3
Water Depth (m)	2472	87

Cable	Erased Channels	Noisy/Weak Channels
1		
2		
3		
4		

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 915
EOL SP 3351
SOL NOISY CHANNELS
S1: 97, 141, 197, 198, 203, 233, 325, 328, 329, 330, 359, 421, 423, 429, 444, 462
S2: 46, 65, 100, 193, 196, 203, 244, 313, 354, 373, 375, 378, 387, 413, 450, 452, 453, 460, 468
S3: 95, 96, 97, 98, 104, 106, 107, 108, 111, 114, 135, 184, 190, 205, 313, 316, 366, 369, 370, 437, 438
S4: 80, 118, 186, 188, 190, 192, 239, 243, 327
EOL NOISY CHANNELS
S1: 97, 100, 141, 197, 198, 203, 233, 325, 328, 329, 342, 359, 429, 441, 444, 462, 468
S2: 46, 65, 100, 193, 196, 203, 244, 354, 373, 375, 387, 413, 452, 460, 466
S3: 95, 96, 97, 98, 104, 106, 107, 108, 111, 114, 135, 184, 190, 205, 313, 316, 366, 369, 437, 438
S4: 80, 118, 186, 188, 190, 192, 239, 243, 327, 456, 462, 465, 467, 468

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	84	92	FGSP	3352
SP #	3352	988	LGSP	1001

Line	MGL1106_1188
Sequence	010
Direction	205

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	420	420	420	420
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	9s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/16/11	4/16/11
Time UTC	0531	1242
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	CALM	5.5 N
Sea State (ft)	1 - 2	1-3
Water Depth (m)	74	2430

Cable	Erased Channels	Noisy/Weak Channels
1		
2		
3		
4		

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 3352 DB13 ~5.8M. Attempted depth correction failed from adjusting DB12 to lower depth
EOL SP 988 Line ended early due to engine problems.
SOL NOISY CHANNELS
S1: 97, 100, 141, 197, 198, 203, 233, 325, 328, 329, 342, 359, 429, 441, 444, 462, 468
S2: 46, 65, 100, 193, 196, 203, 244, 354, 373, 375, 387, 413, 452, 460, 466
S3: 95, 96, 97, 98, 104, 106, 107, 108, 111, 114, 135, 184, 190, 205, 313, 316, 366, 369, 437, 438
S4: 80, 118, 186, 188, 190, 192, 239, 243, 327, 456, 462, 465, 467, 468
EOL NOISY CHANNELS
S1: 97, 100, 138, 141, 144, 197, 198, 203, 233, 325, 328, 329, 330, 344, 359, 380, 383, 424, 425, 426, 429, 441, 444, 462
S2: 100, 203, 313, 354, 387, 413, 452, 460
S3: 95, 104, 106, 107, 110, 111, 114, 135, 190, 205, 313, 316, 370, 437, 438
S4: 80, 186, 188, 190, 192, 220, 239, 243, 327, 367, 456, 462

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Time UTC	FILE	SP	Tape	Description
0531	1	3352	84	SOL
0534	12	3340	84	Auto Fire S1G02
0559	157	3156	84	Auto Fire S1G02
06:24	291	3062	84 - 85	Reel change
06:24	291	3062	85	Auto Fire S1G02
0640	377	2976	85	Auto Fire S1G02
0654	455	2898	85	Auto Fire S1G02
0655	461	2892	85	Auto Fire S1G02
0711	546	2808	85	Auto Fire S1G02
0717	581	2772	85 - 86	Reel change
0720	597	2756	87	Auto Fire S1G02
0726	626	6762	87	Auto Fire S1G02
0730	653	2700	87	Auto Fire S1G02
0749	753	2600	86	Auto Fire S1G02
0753	795	2558	86	Auto Fire S1G02
0759	811	2542	86	Auto Fire S1G02
0809	871	2482	86 - 87	Reel change
0814	893	2460	87	Auto Fire S1G02
0815	901	2452	87	Auto Fire S1G02
0823	951	2402	87	Auto Fire S1G02
0827	967	2386	87	Auto Fire S1G02
0839	1033	2320	87	Auto Fire S1G02
0842	1049	2304	87	Auto Fire S1G02
0902	1161	2192	87 - 88	Reel change
0909	1199	2154	88	Auto Fire S1G02
0913	1224	2128	88	Auto Fire S1G02
0914	1226	2126	88	Auto Fire S1G02
0915	1234	2118	88	Auto Fire S1G02
0919	1258	2094	88	Auto Fire S1G02
0922	1274	2078	88	Auto Fire S1G02
0925	1283	2070	88	Auto Fire S1G02
0928	1299	2054	88	Auto Fire S1G02
0931	1317	2036	88	Auto Fire S1G02
0934	1341	2012	88	Auto Fire S1G02
0947	1402	1950	88	Auto Fire S1G02
0948	1408	1944	88	Auto Fire S1G02
0954	1442	1910	88	Auto Fire S1G02
0955	1446	1906	88	Auto Fire S1G02
0955	1452	1901	88-89	Reel change
1000	1476	1876	89	Auto Fire S1G02
1001	1483	1870	89	Auto Fire S1G02
1002	1497	1856	89	Auto Fire S1G02
1002	1499	1854	89	Auto Fire S1G02
1002	1501	1852	89	Auto Fire S1G02
1005	1509	1844	89	Auto Fire S1G02
1006	1513	1840	89	Auto Fire S1G02
1008	1525	1828	89	Auto Fire S1G02

1012	1547	1806	89	Auto Fire S1G02
1012	1549	1804	89	Auto Fire S1G02
1013	1553	1800	89	Auto Fire S1G02
1016	1567	1786	89	Auto Fire S1G02
1026	1623	1730	89	Auto Fire S1G02
1031	1655	1698	89	Auto Fire S1G02
1040	1703	1650	89	Auto Fire S1G02
1042	1715	1638	89	Auto Fire S1G02
1047	1741	1612	89-90	Reel change
1049	1753	1600	90	Auto Fire S1G02
1053	1773	1580	90	Auto Fire S1G02
1054	1781	1572	90	Auto Fire S1G02
1056	1793	1560	90	Auto Fire S1G02
1100	1815	1538	90	Auto Fire S1G02
1103	1831	1522	90	Auto Fire S1G02
1103	1833	1520	90	Auto Fire S1G02
1111	1879	1474	90	Auto Fire S1G02
1116	1907	1446	90	Auto Fire S1G02
1127	1967	1386	90	Auto Fire S1G02
1139	2031	1322	90-91	Reel change
1141	2039	1314	91	Auto Fire S1G02
1145	2063	1290	91	Auto Fire S1G02
1149	2087	1266	91	Auto Fire S1G02
1150	2093	1260	91	Auto Fire S1G02
1154	2111	1242	91	Auto Fire S1G02
1202	2155	1198	91	Auto Fire S1G02
1203	2159	1194	91	Auto Fire S1G02
1205	2167	1186	91	Auto Fire S1G02
1205	2173	1180	91	Auto Fire S1G02
1206	2175	1178	91	Auto Fire S1G02
1206	2177	1176	91	Auto Fire S1G02
1207	2183	1170	91	Auto Fire S1G02
1208	2189	1164	91	Auto Fire S1G02
1209	2193	1160	91	Auto Fire S1G02
1209	2195	1156	91	Auto Fire S1G02
1210	2201	1156	91	Auto Fire S1G02
1213	2217	1136	91	Auto Fire S1G02
1214	2223	1130	91	Auto Fire S1G02
1217	2232	1120	91	Auto Fire S1G02
1216	2232	1120	91	Auto Fire S1G02
1217	2238	1122	91	Auto Fire S1G02
1218	2241	1112	91	Auto Fire S1G02
1218	2243	1110	91	Auto Fire S1G02
1222	2264	1090	91	Auto Fire S1G02
1225	2281	1076	91	Auto Fire S1G02
1226	2285	1068	91	Auto Fire S1G02
1227	2292	1060	91	Auto Fire S1G02
1230	2209	1044	91	Auto Fire S1G02

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

	SOL	EOL		
Tape #	93	100	FGSP	746
SP #	746	3351	LGSP	3153

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	420	420	420	420
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/16/11	04/17/11
Time UTC	1723	0024
Volume (cu in.)	3300/3300	40/40
Wind (kts)	3 N	CALM
Sea State (ft)	1-3	FLAT
Water Depth (m)	2375	84.1

Cable	Erased Channels	Noisy/Weak Channels
1		
2		
3		
4		

ProMax - QC the above channels

General / Line Comments	
SOL SP 746	
EOL SP 3351 - ENDED LINE WITH MITIGATION GUN FIRING ON EACH SOURCE	
SOL NOISY CHANNELS	
S1: 97, 100, 141, 197, 198, 203, 233, 325, 328, 329, 342, 359, 429, 441, 444, 462, 468	
S2: 46, 65, 100, 193, 196, 203, 244, 354, 373, 375, 387, 413, 452, 460, 466	
S3: 95, 96, 97, 98, 104, 106, 107, 108, 111, 114, 135, 184, 190, 205, 313, 316, 366, 369, 437, 438	
S4: 80, 118, 186, 188, 190, 192, 239, 243, 327, 456, 462, 465, 467, 468	
EOL NOISY CHANNELS	
S1: 97, 100, 141, 197, 198, 203, 233, 325, 328, 329, 342, 359, 429, 441, 444, 462, 468	
S2: 46, 65, 100, 193, 196, 203, 244, 354, 373, 375, 387, 413, 452, 460, 466	
S3: 95, 96, 97, 98, 104, 106, 107, 108, 111, 114, 135, 184, 190, 205, 313, 316, 366, 369, 437, 438	
S4: 80, 118, 186, 188, 190, 192, 239, 243, 327, 456, 462, 465, 467, 468	

Chief Science Officer	Robert Steinhaus		
Science Officer	Anthony Johnson	David Martinson	
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton - 12:00-24:00	
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00	

Line	MGL1106_1044
Sequence	011
Direction	25

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

	SOL	EOL		
Tape #	101	111	FGSP	3280
SP #	3346	873	LGSP	873

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	420	420	420	420
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	04/17/11	4/17/11
Time UTC	0159	09:12
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	5 sw	CALM
Sea State (ft)	1-3	1-3
Water Depth (m)	65	2296

Cable	Erased Channels	Noisy/Weak Channels
1		
2		
3		
4		

ProMax - QC the above channels

General / Line Comments
SOL SP 3280 TAPES 101 TO 103, BAD DATA RECORDED - CHANNEL TESTING NOT PERFORMED IN TIME DUE TO SHUTDOWNS
EOL SP 873
SOL NOISY CHANNELS
S1: 97, 100, 141, 197, 198, 203, 233, 325, 328, 329, 342, 359, 429, 441, 444, 462, 468
S2: 46, 65, 100, 193, 196, 203, 244, 354, 373, 375, 387, 413, 452, 460, 466
S3: 95, 96, 97, 98, 104, 106, 107, 108, 111, 114, 135, 184, 190, 205, 313, 316, 366, 369, 437, 438
S4: 80, 118, 186, 188, 190, 192, 239, 243, 327, 456, 462, 465, 467, 468
EOL NOISY CHANNELS
S1: 97 141 143 197 198 203 233 325 329 330 359 388 429 444 462
S2: 100 135 136 203 247 279 287 288 354 367 376 387 413 432 452 460 468
S3: 111 114 376 447 464 465
S4: 80 118 186 188 190 192 239 243 327

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton - 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

Line	MGL1106_1196
Sequence	012
Direction	206

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

	SOL	EOL		
Tape #	0112	0119	FGSP	885
SP #	885	3351	LGSP	3351

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	420	420	420	420
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/17/11	4/17/11
Time UTC	10:41	17:28
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	CALM	CALM
Sea State (ft)	1-3	1-3
Water Depth (m)	2435	901

Cable	Erased Channels	Noisy/Weak Channels
1		
2		
3		
4		

ProMax - QC the above channels

General / Line Comments	
SOL SP 885	
EOL SP	
SOL NOISY CHANNELS	
S1: 97 141 143 197 198 203 233 325 329 330 359 388 429 444 462	
S2: 100 135 136 203 247 279 287 288 354 367 376 387 413 432 452 460 468	
S3: 111 114 376 447 464 465	
S4: 80 118 186 188 190 192 239 243 327	
EOL NOISY CHANNELS	
S1: 97 141 143 197 198 203 233 325 329 330 359 429 444 462	
S2: 100 203 241 288 354 387 413 452 460 468	
S3: 111 114 465	
S4: 80 186 188 190 192 239 243 327 462	

Chief Science Officer	Robert Steinhaus		
Science Officer	Anthony Johnson	David Martinson	
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton - 12:00-24:00	
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00	

Line	MGL1106_1052
Sequence	013
Direction	25

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

	SOL	EOL		
Tape #	0120	127	FGSP	3350
SP #	3350	873	LGSP	873

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	420	420	420	420
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/17/11	4/18/11
Time UTC	1859	0206
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	SW 6	SW 5
Sea State (ft)	2-3	2-4
Water Depth (m)	66.7	2294

Cable	Erased Channels	Noisy/Weak Channels
1		
2		
3		
4		

ProMax - QC the above channels

General / Line Comments
SOL SP 3350
EOL SP 2294
SOL NOISY CHANNELS
S1: 97 141 143 197 198 203 233 325 329 330 359 429 444 462
S2: 100 203 241 288 354 387 413 452 460 468
S3: 111 114 465
S4: 80 186 188 190 192 239 243 327 462
EOL NOISY CHANNELS
S1: 97, 100, 138, 141, 143, 197, 198, 203, 233, 325, 329, 330, 359, 421, 424, 444, 462
S2: 100, 203, 241, 279, 288, 354, 361, 373, 382, 383, 387, 413, 423, 452, 460, 467
S3: 30, 95, 96, 98, 104, 107, 111, 135, 184, 190, 196, 205, 272, 313, 316, 438, 415
S4: 41, 80, 186, 188, 192, 220, 239, 243, 268, 327, 383

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton - 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

Line	MGL1106_1204
Sequence	014
Direction	209

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

	SOL	EOL		
Tape #	128	135	FGSP	890
SP #	890	3351	LGSP	3351

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	420	420	420	420
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/18/11	4/18/11
Time UTC	0341	1023
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	6.5 N	Calm
Sea State (ft)	2-4	1-+3
Water Depth (m)	2376	90

Cable	Erased Channels	Noisy/Weak Channels
1		
2		
3		
4		

ProMax - QC the above channels

General / Line Comments
SOL SP 890 - AB18 at ~14m at SOL due to current + turn (low tension)
EOL SP 3351
SOL NOISY CHANNELS
S1: 97, 100, 138, 141, 143, 197, 198, 203, 233, 325, 329, 330, 359, 421, 424, 444, 462
S2: 100, 203, 241, 279, 288, 354, 361, 373, 382, 383, 387, 413, 423, 452, 460, 467
S3: 30, 95, 96, 98, 104, 107, 111, 135, 184, 190, 196, 205, 272, 313, 316, 438, 415
S4: 41, 80, 186, 188, 192, 220, 239, 243, 268, 327, 383
EOL NOISY CHANNELS
S1: 97, 100, 138, 141, 143, 197, 198, 203, 233, 325, 328, 329, 330, 359, 388, 429, 444, 462
S2: 100, 203, 241, 288, 354, 386, 387, 413, 45, 460, 468
S3: 316, 447, 464, 465
S4: 41, 80, 186, 188, 190, 192, 239, 243, 268, 327, 383, 467, 468

Chief Science Officer	Robert Steinhaus		
Science Officer	Anthony Johnson	David Martinson	
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton - 12:00-24:00	
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00	

Line	MGL1106_1060
Sequence	015
Direction	26

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton - 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	136	143	FGSP	3251
SP #	3336	873	LGSP	873

Line	MGL1106_1212
Sequence	016
Direction	205.9

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	420	420	420	420
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/18/11	4/18/11
Time UTC	1158	1919
Volume (cu in.)	410/410	3300/3120
Wind (kts)	calm	3 sw
Sea State (ft)	1-3	calm
Water Depth (m)	70	2295

Cable	Erased Channels	Noisy/Weak Channels
1		
2		
3		
4		

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 3336 SOL with Ramp up in proress (410 cu in)
EOL SP 873 - S3G01 disabled, S3G05 enabled to compensate Vol 3120 port source
SOL NOISY CHANNELS
S1: 97, 100, 138, 141, 143, 197, 198, 203, 233, 325, 328, 329, 330, 359, 388, 429, 444, 462
S2: 100, 203, 241, 288, 354, 386, 387, 413, 45, 460, 468
S3: 316, 447, 464, 465
S4: 41, 80, 186, 188, 190, 192, 239, 243, 268, 327, 383, 467, 468
EOL Noisy Channels
s1: 97, 100, 138, 141, 143, 197, 198, 203, 233, 292, 325, 328, 329, 330, 344, 359, 330, 344, 359, 388, 421, 424, 444, 462
s2: 100, 203, 241, 288, 313, 354, 373, 387, 413, 452, 453, 460, 468
s3: 316
s4: 41, 80, 118, 186, 188, 190, 192, 239, 327, 383, 456

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Time UTC	FILE	SP	Tape	Description
1158	1	3336	0136	SOL with ramp up in progress (T +15) 410 cu in
1203	26-29	3313-3310	0136	Shot Error Timing During Ramp up (T +20) 810 cu in, slow to 4 kts STW
1204	31	3308	0136	Shot Timing Error
1208	56	3283	0136	Continue Ramp up (T +25) 1650 cu in
1211	73	3266	0136	SOG 3 kts
1213	80-87	3259-3251	0136	Continue Ramp up (T +30) 3300 cu in, Shot timing errors
1214	88	3252	0136	Full Volume (FGSP)
1219	116	3223	0136	Full Fold
124550	277	3062	0136	Turtle power down
125230	316	3023	0136	Full power resumed
1254	328	3011	0137	Reel change
1310	423	2916	0137	power down
1310	424	2915	017	Power down turtle and dolphin
1310	425	2914	0137	Mitigation power
1338	572	2767	0137	Ramp up 100 in
1342	591	2748	0137	Mitigation shut down
1353		2684	0138	Reel change
1356	676	2671	0138	Ramp up
1401	701	2637	0138	Ramp up 100 cu in
1406	730	2609	0138	Ramp up 190 cu in
1411	759	2579	0138	Ramp up 410 cu in
1416	791	2547	0138	Ramp up 810 cu in
1421	823	2516	0138	Ramp up 1650 cu in
1428	862	2477	0138	Ramp up Completed 3300 cu in
1434	901	2438	0138	Turtle power down
1444	960	2379	0138	Ramp up 100 cu in
1448	982	2355	0139	Reel change
1449	990	2349	0139	Ramp up 190 cu in
1449	994	2345	0139	Turtle power down
1450	1000	2339	0139	Shut down
1455	1025	2314	0139	Continue ramp up 190 cu in
1456	1031	2308	0139	Turtle shut down
1508	1101	2238	0139	1 gun firing 40 cu in
1516	1142	2197	0139	Ramp up 100 cu in
1521	1172	2168	0139	Ramp up 190 cu in
1521	1173	2167	0139	Turtle down
1526	1197	2142	0139	Ramp up 190 cu in
1531	1228	2112	0139	Ramp up 410 cu in; shot error
1536	1256	2083	0139	Ramp up 810 cu in
1536	1257	2082	0139	Shot error
1536	1259	2080	0139	Shot error
1541	1285	2054	0139	No source
1541	1287	2052	0139	Ramp up 1650 cu in
1545	1309	2030	0140	Reel change
1546	1316	2025	0140	No source
1547	1318	2021	0140	Ramp up 3300 cu in
1554	1357	1982	0140	Timing error S3G01

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

	SOL	EOL		
Tape #	144	144	FGSP	912
SP #	912	945	LGSP	945

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	420	420	420	420
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/18/11	4/18/11
Time UTC	20:57	2103
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	3 kts W	3 W
Sea State (ft)	1-3	1-3
Water Depth (m)	2452	2531

Cable	Erased Channels	Noisy/Weak Channels
1		
2		
3		
4		

ProMax - QC the above channels

General/line comments
SOL SP 914 Ended line early due to power loss on main engines
EOL SP 945
SOL NOISY CHANNELS
s1: 97, 100, 138, 141, 143, 197, 198, 203, 233, 292, 325, 328, 329, 330, 344, 359, 330, 344, 359, 388, 421, 424, 444, 462
s2: 100, 203, 241, 288, 313, 354, 373, 387, 413, 452, 453, 460, 468
s3: 316
s4: 41, 80, 118, 186, 188, 190, 192, 239, 327, 383, 456

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

Line	MGL1106_1044i
Sequence	017
Direction	25.9

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton - 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	0145	152	FGSP	780
SP #	780	3351	LGSP	3351

Line	MGL1106_1044J
Sequence	018
Direction	25.9

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	420	420	420	420
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	04/19/11	04/19/11
Time UTC	1451	2150
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	3 NE	calm
Sea State (ft)	1-3	1-2
Water Depth (m)	2357	87

Cable	Erased Channels	Noisy/Weak Channels
1		
2		
3		
4		

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 780 Streamer 2 Bird 1 @9.4m, bird 2 @ 10.4m
EOL SP 3351
SOL NOISY CHANNELS
S1: 1, 97, 100, 138, 141, 143, 197, 198, 203, 233, 325, 328, 329, 330, 343, 344, 359, 386, 421, 429, 444, 462
S2: 100, 203, 288, 313, 354, 373, 387, 452, 460
S3: 30, 95, 96, 97, 98, 104, 107, 111, 114, 135, 190, 205, 225, 313, 316, 370, 438
S4: 23, 80, 186, 188, 190, 239, 243, 327, 468
EOL NOISY CHANNELS
s1: 97, 100, 138, 141, 143, 197, 198, 203, 233, 325, 328, 329, 330, 343, 359, 386, 421, 424, 462
s2: 100, 203, 288, 313, 354, 387, 413, 452, 460, 468
s3: 447, 464, 468
s4: 23, 80, 186, 188, 190, 239, 243, 327, 456, 461, 466, 467, 468

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	153	160	FGSP	853
SP #	853	3351	LGSP	2867

Line	MGL1106_1068
Sequence	019
Direction	26

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	420	420	420	420
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/20/11	4/20/11
Time UTC	9:49	17:02
Volume (cu in.)	3300/3300	40/0
Wind (kts)	10 NW	Calm
Sea State (ft)	1-3	1-2
Water Depth (m)	2432	87

Cable	Erased Channels	Noisy/Weak Channels
1		
2		
3		
4		

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP853 First full fold SP1001 Bird BB19 at 10.8 meters
EOL SP 3351 Ship lost power followed by loss of compressor. Only firing S4G03 at end of line.
SOL NOISY CHANNELS
s1: 97, 100, 138, 141, 143, 197, 198, 203, 233, 325, 328, 329, 330, 343, 359, 386, 421, 424, 462
s2: 100, 203, 288, 313, 354, 387, 413, 452, 460, 468
s3: 447, 464, 468
s4: 23, 80, 186, 188, 190, 239, 243, 327, 456, 461, 466, 467, 468
EOL NOISY CHANNELS
s1: 97, 100, 138, 141, 143, 197, 198, 203, 233, 325, 328, 329, 330, 344, 359, 386, 421, 424, 441-444, 458-462, 465-468
s2: 100, 203, 313, 354, 375, 387, 452, 460, 465, 466, 467, 468
s3: 111, 135, 316, 461, 462, 463, 464, 466, 467, 468
s4: 23, 80, 186, 188, 190, 239, 243, 327, 457, 459-468

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	161	166	FGSP	2572
SP #	2721	873	LGSP	873

Line	MGL1106_1212R
Sequence	020
Direction	205.9

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	420	420	420	420
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/20/11	4/21/11
Time UTC	2037	0206
Volume (cu in.)	100/100	3300/3300
Wind (kts)	SW 14	SW 9
Sea State (ft)	2-3	2-3
Water Depth (m)	140	2291

Cable	Erased Channels	Noisy/Weak Channels
1		
2		
3		
4		

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 2721 Ramping up at SOL 100 CU in
EOL SP 873
SOL NOISY CHANNELS
s1: 97, 100, 138, 141, 143, 197, 198, 203, 233, 325, 328, 329, 330, 344, 359 386 421, 424, 441-444, 458-462, 465-468
s2: 100, 203, 313, 354, 375, 387, 452, 460 465, 466, 467, 468
s3: 111, 135, 316, 461 462 463, 464, 466, 467, 468
s4: 23, 80, 186, 188, 190, 239, 243, 327, 457, 459-468
EOL Noisy Channels
s1: 97, 100, 138, 141, 143, 197, 198, 203, 233, 325, 328, 329, 330, 343, 358, 421, 423, 426, 444, 462
s2: 100, 203, 313, 354, 382, 387, 451, 454, 460
s3: 316, 447, 464, 465
s4: 23, 80, 156, 188, 190, 220, 239, 243, 327, 456, 462, 464, 46, 467, 468

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	167	0174	FGSP	823
SP #	823	3351	LGSP	3351

Line	MGL1106_1068i
Sequence	021
Direction	25.9

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	420	420	420	420
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/21/11	4/21/11
Time UTC	0330	1058
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	SW 11	Calm
Sea State (ft)	4	2-3
Water Depth (m)	2386	88

Cable	Erased Channels	Noisy/Weak Channels
1		
2		
3		
4		

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 823
EOL SP 3351
SOL NOISY CHANNELS
s1: 97, 100, 138, 141, 143, 197, 198, 203, 233, 325, 328, 329, 330, 343, 358, 421, 423, 426, 444, 462
s2: 100, 203, 313, 354, 382, 387, 451, 454, 460
s3: 316, 447, 464, 465
s4: 23, 80, 156, 188, 190, 220, 239, 243, 327, 456, 462, 464, 46, 467, 468
EOL Noisy Channels
s1: 97, 100, 138, 141, 143, 197, 198, 203, 233, 325, 328, 329, 330, 343, 359, 386, 421, 424, 444, 462,
s2: 172, 203, 354, 387, 413, 445, 450, 451, 452, 460
s3: 316, 447
s4: 23, 41, 80, 186, 188, 190, 220, 239, 243, 268, 270, 296, 327, 383, 399, 451, 452, 456, 458, 461, 462, 464, 467, 468

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton - 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	0175	182	FGSP	3378
SP #	3378	873	LGSP	873

Line	MGL1106_1220
Sequence	022
Direction	205

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	420	420	420	420
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/21/11	04/21/11
Time UTC	1228	1914
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	5 SW	10 SSW
Sea State (ft)	2-3	2-3
Water Depth (m)	73	2302

Cable	Erased Channels	Noisy/Weak Channels
1		
2		
3		
4		

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 3378 AB18 Depth 10.8m at SOL
EOL SP 873
SOL NOISY CHANNELS
s1: 97, 100, 138, 141, 143, 197, 198, 203, 233, 325, 328, 329, 330, 343, 359, 386, 421, 424, 444, 462,
s2: 172, 203, 354, 387, 413, 445, 450, 451, 452, 460
s3: 316, 447
s4: 23, 41, 80, 186, 188, 190, 220, 239, 243, 268, 270, 296, 327, 383, 399, 451, 452, 456, 458, 461, 462, 464, 467, 468
EOL Noisy Channels
s1: 97, 100, 138, 141, 143, 192, 203, 233, 291, 325, 328, 329, 330, 343, 344, 359, 386, 421, 422, 424, 444, 462
s2: 100, 203, 240, 313, 354, 387, 413, 450-453, 460
s3: 30, 135, 205, 316, 447, 465
s4: 23, 41, 80, 186, 188, 190, 220, 239, 243, 268, 270, 327, 383, 399, 451, 458, 459, 461, 462, 464, 467, 468

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

	SOL	EOL		
Tape #	183	190	FGSP	824
SP #	824	3351	LGSP	3351

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	420	420	420	420
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/21/11	4/22/11
Time UTC	2043	0431
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	2 SE	5 N
Sea State (ft)	2-3	2-3
Water Depth (m)	2364	79

Cable	Erased Channels	Noisy/Weak Channels
1		
2		
3		
4		

ProMax - QC the above channels

General / Line Comments
SOL SP 824
EOL SP 3351
SOL NOISY CHANNELS
s1: 97, 100, 138, 141, 143, 192, 203, 233, 291, 325, 328, 329, 330, 343, 344, 359, 386, 421, 422, 424, 444, 462
s2: 100, 203, 240, 313, 354, 387, 413, 450-453, 460
s3: 30, 135, 205, 316, 447, 465
s4: 23, 41, 80, 186, 188, 190, 220, 239, 243, 268, 270, 327, 383, 399, 451, 458, 459, 461, 462, 464, 467, 468
EOL Noisy Channels
s1: 97, 100, 138, 141, 143, 197, 198, 203, 233, 325, 329, 330, 345, 354, 386, 421-424, 444, 462
s2: 100, 203, 240, 354, 387, 413, 445, 450, 452, 460
s3: 30, 135
s4: 23, 41, 80, 116, 188, 190, 220, 239, 243, 268, 270, 327, 399, 452, 461, 462, 468

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton - 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

Line	MGL1106_1076
Sequence	023
Direction	25.9

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

	SOL	EOL		
Tape #	191	0198	FGSP	3399
SP #	3399	872	LGSP	872

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	420	420	420	420
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/22/11	4/22/11
Time UTC	552	1245
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	calm	10 SE
Sea State (ft)	3ft	3-4
Water Depth (m)	68	2402

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

Line	MGL1106_1220i
Sequence	024
Direction	205.6

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Cable	Erased Channels	Noisy/Weak Channels
1		
2		
3		
4		

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 3399 AB out of spec 9.7m
EOL SP 872
SOL NOISY CHANNELS
s1: 97, 100, 138, 141, 143, 197, 198, 203, 233, 325, 329, 330, 345, 354, 386, 421-424, 444, 462
s2: 100, 203, 240, 354, 387, 413, 445, 450, 452, 460
s3: 30, 135
s4: 23, 41, 80, 116, 188, 190, 220, 239, 243, 268, 270, 327, 399,452, 461, 462, 468
EOL NOISY CHANNELS
S1: 97, 100, 138, 141, 143, 197, 198, 203, 233, 291, 325, 329, 330, 359, 386, 421, 422, 424, 429, 444, 462
S2: 100, 203, 240, 354, 375, 387, 445, 452, 460
S3: 30, 135, 316, 370, 464, 465
S4: 23, 41, 80, 186, 188, 239, 243, 327, 456, 462, 468

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

	SOL	EOL		
Tape #	199	206	FGSP	845
SP #	845	3351	LGSP	3351

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	420	420	420	420
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/22/11	4/22/11
Time UTC	1410	2209
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	5 E	5 S
Sea State (ft)	2-3	3
Water Depth (m)	2418	80

Cable	Erased Channels	Noisy/Weak Channels
1		
2		
3		
4		

ProMax - QC the above channels

General / Line Comments
SOL SP 845
EOL SP 3351
SOL NOISY CHANNELS
S1: 97, 100, 138, 141, 143, 197, 198, 203, 233, 291, 325, 329, 330, 359, 386, 421, 422, 424, 429, 444, 462
S2: 100, 203, 240, 354, 375, 387, 445, 452, 460
S3: 30, 135, 316, 370, 464, 465
S4: 23, 41, 80, 186, 188, 239, 243, 327, 456, 462, 468
EOL NOISY CHANNELS
s1: 97, 100, 138, 141, 143, 197, 198, 203, 325, 329, 330, 343, 369, 386, 421, 422, 424, 444, 462, 468
s2: 100, 149, 203, 240, 313, 354, 375, 387, 452, 460
s3: 30, 135, 316, 447
S4: 23, 41, 80, 186, 188, 220, 239, 243, 327, 453, 456, 462, 468

Chief Science Officer	Robert Steinhaus		
Science Officer	Anthony Johnson	David Martinson	
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton - 12:00-24:00	
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00	

Line	MGL1106_1084
Sequence	025
Direction	25.9

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	207	214	FGSP	3389
SP #	3391	873	LGSP	873

Line	MGL1106_1228
Sequence	026
Direction	205.9

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	420	420	420	420
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/22/11	4/23/11
Time UTC	2338	626
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	5 S	calm
Sea State (ft)	3	3
Water Depth (m)	62	2321

Cable	Erased Channels	Noisy/Weak Channels
1		
2		
3		
4		

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 3391 FGSP 3389 DB13 Open Loop @6.5m, BB19 Fixed Wings @ 8.5M
EOL SP 873
SOL NOISY CHANNELS
s1: 97, 100, 138, 141, 143, 197, 198, 203, 325, 329, 330, 343, 369, 386, 421, 422, 424, 444, 462,468
s2: 100, 149, 203, 240, 313, 354, 375, 387, 452, 460
s3: 30, 135, 316, 447
S4: 23, 41, 80, 186, 188, 220, 239, 243, 327, 453, 456, 462, 468
EOL NOISY CHANNELS
S1: 97, 100, 138 141, 143, 197, 198, 203, 233, 325, 329, 330, 343, 359, 386, 421, 424, 429, 444, 462
S2: 100, 203, 240, 313, 354, 387, 452, 460
s3: 30, 135, 316
S4: 23, 41, 80, 186, 188, 190, 220, 243, 239, 268, 327, 383, 451, 456, 462, 467, 468

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton - 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	215	222	FGSP	828
SP #	828	3351	LGSP	3351

Line	MGL1106_1092
Sequence	027
Direction	25.9

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	420	420	420	420
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/23/11	4/23/11
Time UTC	755	1614
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	Calm	Calm
Sea State (ft)	3	1
Water Depth (m)	2377	85

Cable	Erased Channels	Noisy/Weak Channels
1		
2		
3		
4		

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 828 DB13@6.8m
EOL SP 3351
SOL NOISY CHANNELS
S1: 97, 100, 138 141, 143, 197, 198, 203, 233, 325, 329, 330, 343, 359, 386, 421, 424, 429, 444, 462
S2: 100, 203, 240, 313, 354, 387, 452, 460
s3: 30, 135, 316
S4: 23, 41, 80, 186, 188, 190, 220, 243, 239, 268, 327, 383, 451, 456, 462, 467, 468
EOL NOISY CHANNELS
S1: 97, 100, 138, 141, 143, 197, 198, 203, 233, 279, 325, 329, 330, 343, 359, 386, 421, 424, 444, 462
S2: 100, 203, 240, 301, 302, 303, 354, 375, 387, 452, 460
S3: 316, 447
S4: 23, 41, 80, 186, 188, 220, 239, 213, 327, 451, 456, 467, 468

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton - 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	223	230	FGSP	3530
SP #	3530	1001	LGSP	1001

Line	MGL1106_1236
Sequence	028
Direction	205.9

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	420	420	420	420
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/23/11	4/24/11
Time UTC	1739	0031
Volume (cu in.)	3300/3300	3300/3260
Wind (kts)	Calm	5 N
Sea State (ft)	1	1-3
Water Depth (m)	67	2298

Cable	Erased Channels	Noisy/Weak Channels
1		
2		
3		
4		

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 3530 - SPs are 128 shots off from normal due to FSP input error in Spectra
EOL SP 1001
SOL NOISY CHANNELS
S1: 97, 100, 138, 141, 143, 197, 198, 203, 233, 279, 325, 329, 330, 343, 359, 386, 421, 424, 444, 462
S2: 100, 203, 240, 301, 302, 303, 354, 375, 387, 452, 460
S3: 316, 447
S4: 23, 41, 80, 186, 188, 220, 239, 213, 327, 451, 456, 467, 468
EOL NOISY CHANNELS
s1: 97, 100, 138, 141, 143, 197, 198, 203, 233, 325, 329, 330, 343, 359, 386, 421, 424, 444, 462
s2: 100, 203, 240, 313, 354, 387, 452, 460
s3: 107, 316
s4: 23, 80, 186, 188, 239, 243, 327, 456, 462, 468

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	231	238	FGSP	862
SP #	832	2488	LGSP	2488

Line	MGL1106_1100
Sequence	029
Direction	26

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	420	420	420	420
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/24/11	4/24/11
Time UTC	0156	1055
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	4 W	3 NE
Sea State (ft)	1-3	1-3
Water Depth (m)		84

Cable	Erased Channels	Noisy/Weak Channels
1		
2		
3		
4		

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 832 - Spectra 1 not recording shots - Issue resolved SP 862
EOL SP 2488
SOL NOISY CHANNELS
s1: 97, 100, 138, 141, 143, 197, 198, 203, 233, 325, 329, 330, 343, 359, 386, 421, 424, 444, 462
s2: 100, 203, 240, 313, 354, 387, 452, 460
s3: 107, 316
s4: 23, 80, 186, 188, 239, 243, 327, 456, 462, 468
EOL NOISY CHANNELS
S1: 97, 100, 141, 143, 197, 198, 203, 233, 325, 329, 330, 336, 337, 338, 339, 340, 343, 359, 386, 421, 424, 444, 462
S2: 203, 240, 313, 354, 387, 375, 452, 460
S3: 30, 97, 107, 135, 316, 370, 447,
S4: 23, 80, 186, 188, 239, 243, 327, 453, 456, 462, 467, 468

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton - 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	239	246	FGSP	3355
SP #	3355	873	LGSP	873

Line	MGL1106_1244
Sequence	030
Direction	205.9

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	420	420	420	420
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/24/11	4/24/11
Time UTC	1237	1921
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	Calm	NE 6
Sea State (ft)	1-3	1-3
Water Depth (m)	67	2301

Cable	Excessively Noisy Channels (with uBar)
1	141(47u), 325(66u), 330(50u), 421(259u), 444(45u)
2	100(45u), 313(78u), 450(39u), 452(26u)
3	na
4	452(14u), 453(18u), 456(57u), 462(18u)

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 3355
EOL SP 873
SOL NOISY CHANNELS
S1: 97, 100, 141, 143, 197, 198, 203, 233, 325, 329, 330, 336, 337, 338, 339, 340, 343, 359, 386, 421, 424, 444, 462
S2: 203, 240, 313, 354, 387, 375, 452, 460
S3: 30, 97, 107, 135, 316, 370, 447,
S4: 23, 80, 186, 188, 239, 243, 327, 453, 456, 462, 467, 468
EOL NOISY CHANNELS
S1: 97, 100, 135, 138, 141, 143, 197, 198, 203, 273, 291, 292, 325, 329, 330, 343, 344, 359, 386, 421, 424, 444, 462
s2:100, 203, 240, 303, 306, 307, 308, 354, 355, 356, 375, 387, 413, 450, 452, 453, 454, 457, 460
s3: 316
s4: 23, 41, 20, 186, 188, 190, 239, 243, 262, 279, 327, 452, 453, 456, 462

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

	SOL	EOL		
Tape #	247	248	FGSP	836
SP #	836	1238	LGSP	1238

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	420	420	420	420
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/24/11	04/24/11
Time UTC	2052	2242
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	6 NW	Calm
Sea State (ft)	1-3	1-3
Water Depth (m)	2394	??

Cable	Excessively Noisy Channels (with uBar)
1	
2	
3	
4	

ProMax - QC the above channels

General / Line Comments
SOL SP 863
EOL SP ENDED LINE DUE TO TELEMETRY ERRORS ON STREAMER 1
SOL NOISY CHANNELS
S1: 97, 100, 135, 138, 141, 143, 197, 198, 203, 273, 291, 292, 325, 329, 330, 343, 344, 359, 386, 421, 424, 444, 462
s2: 100, 203, 240, 303, 306, 307, 308, 354, 355, 356, 375, 387, 413, 450, 452, 453, 454, 457, 460
s3: 316
s4: 23, 41, 20, 186, 188, 190, 239, 243, 262, 279, 327, 452, 453, 456, 462

Chief Science Officer	Robert Steinhaus		
Science Officer	Anthony Johnson	David Martinson	
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton - 12:00-24:00	
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00	

Line	MGL1106_1108
Sequence	031
Direction	25.9

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	249	253	FGSP	1749
SP #	1749	3351	LGSP	3351

Line	MGL1106_1108R
Sequence	032
Direction	25.9

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	420	420	420	420
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/25/11	4/26/11
Time UTC	2350	0542
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	calm	calm
Sea State (ft)	2-3	1-3
Water Depth (m)	1034	79

Cable	Excessively Noisy Channels (with uBar)
1	141@55, 444@58, 203@37, 359@33
2	None over 23
3	225@34, 316@42
4	415@92, 456@65

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 1749
EOL SP 3351
SOL NOISY CHANNELS
s1: 135, 141, 233, 292, 324, 344, 359, 386, 429, 444, 462
s2: 100, 203, 240, 303, 306, 307, 308, 354, 355, 356, 375, 387, 413, 450, 452, 453, 454, 457, 460
s3: 316
s4: 23, 41, 20, 186, 188, 190, 239, 243, 262, 279, 327, 452, 453, 456, 462
EOL NOISY CHANNELS
s1: 135, 141, 203, 233, 291, 293, 324, 344, 354, 386, 429, 444
s2: 203, 240, 354, 387, 452, 460
s3: 30, 97, 108, 135, 225, 316, 447
s4: 23, 80, 186, 188, 243, 327, 415, 452, 453, 456, 458, 461, 462, 465, 468

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	254	261	FGSP	3373
SP #	3398	873	LGSP	873

Line	MGL1106_1252
Sequence	033
Direction	205.9

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	420	420	420	420
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/26/11	4/26/11
Time UTC	0711	1356
Volume (cu in.)	3300/3300	3220/3300
Wind (kts)	Calm	3SW
Sea State (ft)	1-3	1-3
Water Depth (m)	67	2310

Cable	Excessively Noisy Channels (with uBar)
1	141 @ 58, 203@39, 233@31, 359@34, 429@30, 444@46
2	100@45, 313@38
3	108 @ 32
4	456 @ 177

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 3398 BB19 out of spec 6.3m DB13 out of spec 5.6m
EOL SP 873 3220 cu in on source 1
SOL NOISY CHANNELS
s1: 135, 141, 203, 233, 291, 293, 324, 344, 354, 386, 429, 444
s2: 203, 240, 354, 387, 452, 460
s3: 30, 97, 108, 135, 225, 316, 447
s4: 23, 80, 186, 188, 243, 327, 415, 452, 453, 456, 458, 461, 462, 465, 468
EOL NOISY CHANNELS
s1: 97, 135, 138, 141, 203, 233, 292, 324, 359, 386, 429, 444, 462
s2: 100, 203, 240, 313, 354, 375, 387, 450, 452, 453, 460
s3: 30, 97, 98, 107, 108, 135, 190, 316, 358
s4: 23, 80, 186, 188, 243, 325-329, 331, 334-336, 353, 354, 451-453, 455, 456, 458, 467, 468

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

	SOL	EOL		
Tape #	262	269	FGSP	821
SP #	821	3351	LGSP	3351

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	420	420	420	420
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/26/11	4/27/11
Time UTC	1533	0033
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	5 SW	8 NW
Sea State (ft)	1-3	1-3
Water Depth (m)	2401	75

Cable	EOL High Noise Channels
1	141-58u, 203-35u, 233-32u, 386-30u, 444-54u, 462-42u
2	100-44u, 387-30u
3	107-48u, 465-31u
4	80-30u, 462-121u

ProMax - QC the above channels

General / Line Comments	
SOL	SP 821 S4G04 Spared S4G05 Active DB13 out of spec 4.9m
EOL	SP 3351 S4G04 Spared, S4G05 Active DB16 out of spec 5.0m
SOL NOISY CHANNELS	
s1:	97, 135, 138, 141, 203, 233, 292, 324, 359, 386, 429, 444, 462
s2:	100, 203, 240, 313, 354, 375, 387, 450, 452, 453, 460
s3:	30, 97, 98, 107, 108, 135, 190, 316, 358
s4:	23, 80, 186, 188, 243, 325-329, 331, 334-336, 353, 354, 451-453, 455, 456, 458, 467, 468
EOL NOISY CHANNELS	
s1:	97, 100, 135, 138, 141, 202, 203, 233, 324, 344, 359, 383, 386, 429, 444, 462, 468
s2:	100, 203, 240, 254, 354, 375, 387, 413, 452, 260
s3:	97, 107, 108, 135, 316, 447, 465
s4:	23, 41, 80, 186, 190, 239, 243, 268, 327, 451, 452, 453, 455, 457, 458, 459, 461, 462, 467, 468

Chief Science Officer	Robert Steinhaus		
Science Officer	Anthony Johnson	David Martinson	
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton - 12:00-24:00	
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00	

Line	MGL1106_1116
Sequence	034
Direction	25.9

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	270	277	FGSP	3254
SP #	3254	873	LGSP	873

Line	MGL1106_1260
Sequence	035
Direction	205.9

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/27/11	4/27/11
Time UTC	0228	0844
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	8 SW	8 NW
Sea State (ft)	1-3	3-5
Water Depth (m)	56.4	2304

Cable	EOL High Noise Channels
1	138 @33, 141 @64, 203 @41, 233 @31, 359 @32, 386 @30, 444 @45
2	313 @163
3	none
4	375 @43, 376 @47

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 3254 DB13 out of spec 5.7m
EOL SP 873 DB13 Still out of spec at 5.7m
SOL NOISY CHANNELS
s1: 97, 100, 135, 138, 141, 202, 203, 233, 324, 344, 359, 383, 386, 429, 444, 462, 468
s2: 100, 203, 240, 254, 354, 375, 387, 413, 452, 260
s3: 97, 107, 108, 135, 316, 447, 465
s4: 23, 41, 80, 186, 190, 239, 243, 268, 327, 451, 452, 453, 455, 457, 458, 459, 461, 462, 467, 468
EOL NOISY CHANNELS
s1: 37, 135, 138, 141, 143, 203, 233, 292, 324, 344, 359, 386, 427, 429, 444, 462, 467
s2: 203, 240, 313, 354, 375, 387, 413, 452, 460
s3: 30, 97, 98, 107, 108, 135, 316, 358, 447, 465
s4: 23, 80, 186, 188, 243, 327, 373-378, 451-453, 455-468, 462, 467, 468

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	278	285	FGSP	812
SP #	812	3351	LGSP	3351

Line	MGL1106_1124
Sequence	036
Direction	25.9

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/27/11	4/27/11
Time UTC	1014	1952
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	8 NW	5 W
Sea State (ft)	3-5	4-5
Water Depth (m)	2392	72

Cable	EOL High Noise Channels
1	141-55u, 203-47u, 233-33u, 324-130u, 359-34u, 429-31u, 444-48u
2	none
3	316-25u
4	456-91u, 468-34u

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 812 DB13 out of spec 5.3m
EOL SP 3351 DB13 out of spec 5.3m
SOL NOISY CHANNELS
s1: 37, 135, 138, 141, 143, 203, 233, 292, 324, 344, 359, 386, 427, 429, 444, 462, 467
s2: 203, 240, 313, 354, 375, 387, 413, 452, 460
s3: 30, 97, 98, 107, 108, 135, 316, 358, 447, 465
s4: 23, 80, 186, 188, 243, 327, 373-378, 451-453, 455-468, 462, 467, 468
EOL NOISY CHANNELS:
s1: 97, 100, 135, 138, 141, 143, 203, 233, 324, 344, 359, 386, 427, 429, 444, 462
s2: 203, 240, 354, 375, 387, 452, 460
s3: 30, 107, 108, 135, 307, 316, 447
s4: 23, 80, 186, 188, 243, 327, 451-453, 455-458, 461, 462, 465, 458

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	286	287	FGSP	3308
SP #	3308	2690	LGSP	2690

Line	MGL1106_1268
Sequence	037
Direction	205.9

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/27/11	4/27/11
Time UTC	2141	2326
Volume (cu in.)	3300/3300	40/40
Wind (kts)	10 SSW	6 SSW
Sea State (ft)	3-4	3-4
Water Depth (m)	59	143

Cable	EOL High Noise Channels
1	
2	
3	
4	

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 3308 DB13 Out of spec 5.4m, S4G04 flatlined in Ramp up, set to spare - S4G05 enabled
EOL SP 2690 ENDED DUE TO COMPRESSOR FAILIRE
SOL NOISY CHANNELS
s1: 97, 100, 135, 138, 141, 143, 203, 233, 324, 344, 359, 386, 427, 429, 444, 462
s2: 203, 240, 354, 375, 387, 452, 460
s3: 30, 107, 108, 135, 307, 316, 447
s4: 23, 80, 186, 188, 243, 327, 451-453, 455-458, 461, 462, 465, 458
EOL NOISY CHANNELS:
NOT RECORDED DUE TO SUDDEN LINE END - CONTINUE ON TO MGL1106_1268A

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

	SOL	EOL		
Tape #	288	292	FGSP	2407
SP #	2407	873	LGSP	873

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/28/11	4/28/11
Time UTC	0011	0415
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	5 SSE	5 SW
Sea State (ft)	1-3	1-3
Water Depth (m)	359	2288

Cable	EOL High Noise Channels
1	
2	
3	
4	

ProMax - QC the above channels

General / Line Comments
SOL SP 2407 DB13 out of spec 5.4m
EOL SP 873 DB13 out of spec 5.4m
SOL NOISY CHANNELS
s1: 97, 100, 135, 138, 141, 143, 203, 233, 324, 344, 359, 386, 427, 429, 444, 462
s2: 203, 240, 354, 375, 387, 452, 460
s3: 30, 107, 108, 135, 307, 316, 447
s4: 23, 80, 186, 188, 243, 327, 451-453, 455-458, 461, 462, 465, 458
EOL Noisy Channels:
s1: 97, 100, 135, 141, 143, 203, 233, 291, 292, 324, 344, 359, 386, 416, 429, 444, 452, 487, 468
s2: 203, 240, 313, 354, 375, 387, 452, 460
s3: 30, 97, 98, 107, 108, 111, 135, 190, 205, 313, 316, 350
s4: 23, 80, 186, 188, 243, 327, 451, 453, 455, 456, 457, 458, 462, 468

Chief Science Officer	Robert Steinhaus		
Science Officer	Anthony Johnson	David Martinson	
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton - 12:00-24:00	
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00	

Line	MGL1106_1268a
Sequence	038
Direction	205.9

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	293	300	FGSP	825
SP #	825	3351	LGSP	3351

Line	MGL1106_1124i
Sequence	039
Direction	25.9

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/28/11	4/28/11
Time UTC	543	1503
Volume (cu in.)	3300/3300	3260/3300
Wind (kts)	Calm	Calm
Sea State (ft)	1-3	1-3
Water Depth (m)	2383	80

Cable	EOL High Noise Channels
1	141@55, 199@46, 200@32, 203@50, 324@71, 359@35, 429@32, 444@48
2	100@44, 313@37, 387@30
3	316 @ 38
4	452@40, 456@619

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 825 DB13 out of spec 5.4m
EOL SP 3351 DB13 Out of spec 5.6m
SOL NOISY CHANNELS
s1: 97, 100, 135, 141, 143, 203, 233, 291, 292, 324, 344, 359, 386, 416, 429, 444, 452, 487, 468
s2: 203, 240, 313, 354, 375, 387, 452, 460
s3: 30, 97, 98, 107, 108, 111, 135, 190, 205, 313, 316, 350
s4: 23, 80, 186, 188 243, 327, 451, 453, 455, 456, 457, 458, 462, 468
EOL NOISY CHANNELS
s1: 97, 100, 135, 141, 143, 199, 200, 203, 233, 324, 344, 359, 386, 427, 429, 444, 462
S2: 83, 100, 203, 240, 313, 354, 355, 357, 375, 387, 450, 452
S3: 30, 135, 316, 447, 465
s4: 23, 80, 186, 188, 243, 327, 397, 398, 399, 451-456, 462

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	301	308	FGSP	3402
SP #	3402	873	LGSP	873

Line	MGL1106_1268I
Sequence	040
Direction	205.9

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/28/11	4/28/11
Time UTC	1636	2232
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	4 S	9 S
Sea State (ft)	1	2-3
Water Depth (m)	67	2272

Cable	EOL High noise channels
1	141-52u, 203-44u, 233-31, 324-29u, 386-27u,429-29u, 444-46u
2	100-44u, 313-27u
3	107-31u, 108-33u
4	456-216u, 462-35u

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 3402 DD13 out of spec at 6.1m
EOL SP 873 DB13out of spec at 5.7
SOL NOISY CHANNELS
s1: 97, 100, 135, 141, 143, 199, 200, 203, 233, 324, 344, 359, 386, 427, 429, 444, 462
S2: 83, 100, 203, 240, 313, 354, 355, 357, 375, 387, 450, 452
S3: 30, 135, 316, 447, 465
s4: 23, 80, 186, 188, 243, 327, 397, 398, 399, 451-456, 462
EOL NOISY CHANNELS
s1: 97, 135, 141, 143, 203, 233, 324, 344, 359, 386, 427, 429, 444
s2: 100, 164, 203, 240, 354, 375, 387, 452, 460
s3: 30, 97, 98, 107, 108, 111, 135, 225, 316, 358, 447, 464, 465
s4: 80 186, 188, 190, 243, 327, 452, 455, 456, 457, 458, 462, 468

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	309	316	FGSP	818
SP #	818	3352	LGSP	3352

Line	MGL1106_1132
Sequence	041
Direction	25.9

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/29/11	4/29/11
Time UTC	0101	1016
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	2E	8E
Sea State (ft)	2-3	1
Water Depth (m)	2367	77

Cable	EOL High noise channels
1	141@58, 203@48, 233@33, 324@33, 359@34, 386@32, 429@30, 444@49
2	100@44, 313@38
3	316 @53
4	@72, 188@41, 248@49, 327@53, 451@437, 452@59, 456@67, 459@40, 461@52, 462@

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments	
SOL SP 818	
EOL SP 2534 DB13 out of the spec 5.4m	
SOL NOISY CHANNELS	
s1: 97, 135, 141, 143, 203, 233, 324, 344, 359, 386, 427, 429, 444	
s2: 100, 164, 203, 240, 354, 375, 387, 452, 460	
s3: 30, 97, 98, 107, 108, 111, 135, 225, 316, 358, 447, 464, 465	
s4: 80 186, 188, 190, 243, 327, 452, 455, 456, 457, 458, 462, 468	
EOL NOISY CHANNELS	
s1: 97, 135, 141, 143, 203, 233, 324, 359, 386, 416, 423, 427, 429, 441, 444, 468	
s2: 100,203, 240, 313, 354, 375, 387, 460, 450, 452	
s3: 30, 97, 98, 107, 108, 111, 135, 313, 316, 358	
s4: 23, 41, 80, 186, 188, 190, 220, 239, 243, 268, 269, 270, 327, 382, 383, 427, 451-459, 461, 462, 464, 468	

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

	SOL	EOL		
Tape #	317	324	FGSP	3394
SP #	3394	873	LGSP	873

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/29/11	4/29/11
Time UTC	1153	1900
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	6 SW	7 SSW
Sea State (ft)	1	1-3
Water Depth (m)	67	2286

Cable	High Noise Channels
1	
2	
3	
4	

ProMax - QC the above channels

General / Line Comments
SOL SP 3394 DB13 out of spec at 5.8m, DA18 out of spec at 9.1m
EOL SP
SOL NOISY CHANNELS
s1: 97, 135, 141, 143, 203, 233, 324, 359, 386, 416, 423, 427, 429, 441, 444, 468
s2: 100,203, 240, 313, 354, 375, 387, 460, 450, 452
s3: 30, 97, 98, 107, 108, 111, 135, 313, 316, 358
s4: 23, 41, 80, 186, 188, 190, 220, 239, 243, 268, 269, 270, 327, 382, 383, 427, 451-459, 461, 462, 464, 468
EOL NOISY CHANNELS
NOT RECORDED DUE TO WORK BOAT OPS - USE SOL NOISY CHANNELS

Chief Science Officer	Robert Steinhaus		
Science Officer	Anthony Johnson	David Martinson	
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00	
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00	

Line	MGL1106_1276
Sequence	042
Direction	205.9

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
	N.T.B.P. - Not To Be Processed

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	325	332	FGSP	850
SP #	850	3351	LGSP	3351

Line	MGL1106_1140
Sequence	043
Direction	25.9

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/29/11	4/30/11
Time UTC	2032	0553
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	5 S	Calm
Sea State (ft)	1-3	1-3
Water Depth (m)	2394	80

Cable	High Noise Channels
1	141@57, 203@46, 233@32, 324@40, 359@35
2	100@44, 313@37
3	316 @58
4	451 @31

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 850
EOL SP 3351
SOL NOISY CHANNELS
NOT RECORDED DUE TO WORK BOAT OPS
EOL NOISY CHANNELS
s1: 97, 135, 141, 143, 203, 233, 324, 344, 359, 386, 416, 423, 429, 444, 462
s2: 100, 203, 313, 354, 375, 387, 413, 450, 452, 460
s3: 30, 107, 108, 111, 135, 313, 316, 447
s4: 23, 80, 186, 188, 190, 243, 327, 451, 462, 464, 467, 468

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

	SOL	EOL		
Tape #	333	340	FGSP	3410
SP #	3410	873	LGSP	873

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/30/11	4/30/11
Time UTC	0733	1450
Volume (cu in.)	3300/3300	330/3300
Wind (kts)	Calm	5 sw
Sea State (ft)	1-3	1-3
Water Depth (m)	65	2310

Cable	EOL high noise channels
1	141@62, 203@48, 233@35, 359@35, 386@31, 429@30, 444@40
2	313 @37
3	316 @56
4	451 @39, 456@307, 462@40

ProMax - QC the above channels

General / Line Comments	
SOL SP 3410	
EOL SP 873	
SOL NOISY CHANNELS	
s1: 97, 135, 141, 143, 203, 233, 324, 344, 359, 386, 416, 423, 429, 444, 462	
s2: 100, 203, 313, 354, 375, 387, 413, 450, 452, 460	
s3: 30, 107, 108, 111, 135, 313, 316, 447	
s4: 23, 80, 186, 188, 190, 243, 327, 451, 462, 464, 467, 468	
EOL NOISY CHANNELS	
s1: 97, 135, 141, 143, 203, 233, 292, 324, 344, 359, 386, 416, 429, 444, 462, 467	
s2: 203, 240, 313, 354, 375, 387, 452, 460	
s3: 30, 111, 135, 225, 313, 316, 447, 465	
s4: 23, 80, 186, 188, 190, 243, 327, 451, 452, 455-458, 461, 462, 468	

Chief Science Officer	Robert Steinhaus		
Science Officer	Anthony Johnson	David Martinson	
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton - 12:00-24:00	
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00	

Line	MGL1106_1284
Sequence	044
Direction	205.9

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	341	348	FGSP	802
SP #	802	3351	LGSP	3351

Line	MGL1106_1148
Sequence	045
Direction	25.9

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	4/30/11	5/1/11
Time UTC	1616	0152
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	calm	6 NW
Sea State (ft)	1-3	2-3
Water Depth (m)	2300	70.8

Cable	EOL High Noise Channels
1	143-55u, 203-39u, 233-33u, 386-30u, 429-30u, 444-45u
2	179-69u, 386-56u, 387-32u
3	316-42u, 370-31u
4	80-70u, 186-30u, 188-41u, 243-46u, 327-51u, 451-216u, 453-101u, 462-30u

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 802
EOL SP 3351
SOL NOISY CHANNELS
s1: 97, 135, 141, 143, 203, 233, 292, 324, 344, 359, 386, 416, 429, 444, 462, 467
s2: 203, 240, 313, 354, 375, 387, 452, 460
s3: 30, 111, 135, 225, 313, 316, 447, 465
s4: 23, 80, 186, 188, 190, 243, 327, 451, 452, 455-458, 461, 462, 468
EOL NOISY CHANNELS
s1: 97, 135, 141, 143, 203, 233, 292, 324, 344, 359, 386, 416, 423, 429, 444, 462, 467, 468
s2: 199, 203, 240, 354, 357, 364, 365, 375, 386, 387, 450, 454, 460
s3: 30, 97, 107, 108, 111, 135, 313, 316, 358, 370, 447, 465
s4: 23, 41, 80, 186, 188, 190, 220, 239, 243, 268, 269, 270, 327, 382, 383, 399, 427, 451-459, 461, 462, 465, 468

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	349	356	FGSP	3376
SP #	3376	873	LGSP	873

Line	MGL1106_1292
Sequence	046
Direction	205.9

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	5/1/11	5/1/11
Time UTC	0340	1051
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	CALM	5SW
Sea State (ft)	1-3	1
Water Depth (m)	56.3	2315

Cable	EOL High Noise Channels
1	141@61, 203@44, 233@35, 359@35, 386@31, 429@31, 444@47, 462@34
2	313 @38
3	107@30, 316@46
4	456 @290

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 3376
EOL SP 873
SOL NOISY CHANNELS
s1: 97, 135, 141, 143, 203, 233, 292, 324, 344, 359, 386, 416, 423, 429, 444, 462, 467, 468
s2: 199, 203, 240, 354, 357, 364, 365, 375, 386, 387, 450, 454, 460
s3: 30, 97, 107, 108, 111, 135, 313, 316, 358, 370, 447, 465
s4: 23, 41, 80, 186, 188, 190, 220, 239, 243, 268, 269, 270, 327, 382, 383, 399, 427, 451-459, 461, 462, 465, 468
EOL NOISY CHANNELS
s1: 97, 135, 141, 143, 203, 233, 291, 292, 324, 344, 359, 386, 416, 427, 429, 444, 462
s2: 203, 240, 313, 354, 357, 375, 387, 452, 460
s3: 30, 107, 135, 313, 316, 366, 369, 447, 465
s4: 23, 80, 186, 188, 190, 243, 327, 451, 452, 454-458, 461, 462

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

	SOL	EOL		
Tape #	357	364	FGSP	814
SP #	814	3351	LGSP	3351

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	5/1/11	5/1/11
Time UTC	1235	
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	calm	5 WNW
Sea State (ft)	1	1-3
Water Depth (m)	2402	77

Cable	EOL High Noise Channels (in u-bar)
1	141-55, 203-40, 233-32, 359-44, 386-41, 429-30, 444-47
2	386-47, 387-31
3	30-31, 107-75, 108-31, 135-71, 358-41, 370-106
4	80-67, 188-39, 243-46, 327-37, 451-212, 452-57, 455-32, 462-68

ProMax - QC the above channels

General / Line Comments	
SOL SP 814	
EOL SP 3351 - SEG-D HEADER WILL DISPLAY AS "MGL1106_1108R"	
SOL NOISY CHANNELS	
s1: 97, 135, 141, 143, 203, 233, 291, 292, 324, 344, 359, 386, 416, 427, 429, 444, 462	
s2: 203, 240, 313, 354, 357, 375, 387, 452, 460	
s3: 30, 107, 135, 313, 316, 366, 369, 447, 465	
s4: 23, 80, 186, 188, 190, 243, 327, 451, 452, 454-458, 461, 462	
EOL NOISY CHANNELS	
s1: 97, 135, 141, 143, 203, 233, 292, 324, 359, 386, 416, 429, 444, 462, 467, 468	
s2: 203, 240, 354, 357, 377, 386, 387, 452, 460	
s3: 30, 95, 96, 97, 98, 107, 108, 135, 190, 272, 316, 366, 367, 370, 449, 464, 465	
s4: 23, 41, 80, 186, 188, 190, 220, 239, 243, 268, 269, 270, 327, 382, 383, 399, 451-453, 455-459, 462, 467, 468	

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton - 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

Line	MGL1106_1108S
Sequence	047
Direction	25.9

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Time UTC	FILE	SP	Tape	Description
1235	1	814	357	SOL
1335	278	1091	357	S1G04 Timing err
1341	303-304	1116-1117	357	Power Down Turtle; no source
1345	321-322	1134-1135	357	No source
1345	323	1136	357	Resume Full Power
1347	328	1141	358	Reel change
1419	482-483	1295-1296	358	Power Down Turtle; no source
1426	518-519	1331-1332	358	No source
1426	520	1333	358	Resume Full Power
1431	540-541	1353-1354	358	Power Down Turtle; no source
1438	573	1386	358	No source
1438	574	1387	358	Resume Full Power
1443	599-600	1412-1413	358	Power Down Turtle; no source
1454	650	1463	358	ramp up 100 cu in
1455	655	1468	359	Reel change
1459	675	1488	359	ramp up 190 cu in
1501	685	1498	359	Power Down Turtle
1505	704	1517	359	Continue Ramp up 190 cu in
1509	724	1537	359	Ramp up 410 cu in
1514	747	1559	359	Ramp up 810 cu in
1519	770	1583	359	ramp up 1650 cu in
1524	791-792	1604-1605	359	No source
1524	793	1606	359	Resume Full Power
1524	795	1608	359	S1G10 timing err
1549	905-907	1718-1720	359	Power Down Turtle; no source
1552	926	1739	359	No source
1553	927	1740	359	Resume Full Power
1604	982	1795	360	Reel change
1617	1039-1040	1852-1853	360	Power Down Turtle; no source
1623	1068	1881	360	No source
1623	1069	1882	360	Resume Full Power
1654	1213	2026	360	Power Down Turtle; no source
1658	1233	2045	360	No source
1658	1234	2046	360	Resume Full Power
1715	1309	2122	361	Reel change
1744	1438-1439	2251-2252	361	Power Down Turtle; no source
1749	1461	2274	361	Resume Full Power
1828	1635	2448	361-362	Reel change
1907	1804	2617	362	Power down for turtle
1912	1828	2641	362	Resume Full Power
1919	1862	2675	362	Turtle Power down
1924	1883	2696	362	Resume Full Power
1942	1963	2776	362-363	Reel change
2053	2290	3103	363-364	Reel change
2142	2538	3351	364	EOL

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	365	372	FGSP	3327
SP #	3327	873	LGSP	873

Line	MGL1106_1276R
Sequence	048
Direction	205.9

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	5/1/11	5/2/11
Time UTC	2346	634
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	2.5 W	calm
Sea State (ft)	calm	calm
Water Depth (m)	56.9	2308

Cable	EOL High Noise Channels (in u-bar)
1	141@55, 203@39, 233@32, 359@34, 386@31, 429@31, 444@50
2	313 @36
3	316 @50
4	456 @456

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 3227
EOL SP 873 S1G04 disabled, S1G05 enabled
SOL NOISY CHANNELS
s1: 97, 135, 141, 143, 203, 233, 292, 324, 359, 386, 416, 429, 444, 462, 467, 468
s2: 203, 240, 354, 357, 377, 386, 387, 452, 460
s3: 30, 95, 96, 97, 98, 107, 108, 135, 190, 272, 316, 366, 367, 370, 449, 464, 465
s4: 23, 41, 80, 186, 188, 190, 220, 239, 243, 268, 269, 270, 327, 382, 383, 399, 451-453, 455-459, 462, 467, 468
EOL NOISY CHANNELS
s1: 97, 135, 141, 143, 198, 203, 233, 292, 324, 344, 359, 386, 416, 429, 444, 462, 467
s2: 203, 240, 313, 354 357, 375, 387, 450, 452, 460
S3: 30, 107, 108, 111, 135, 225, 313, 316, 358, 369, 370 465
s4: 23, 80, 186, 188, 190, 243, 327, 541-546, 462, 467, 468

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

	SOL	EOL		
Tape #	373	380	FGSP	803
SP #	803	3351	LGSP	3169

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	5/2/11	5/2/11
Time UTC	803	1727
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	Calm	Calm
Sea State (ft)	1-2	1-2
Water Depth (m)	2296	77

Cable	EOL High Noise Channels (in u-bar)
1	141@55, 203@39, 233@32, 359@33, 386@32, 429@30, 444@48
2	313 @37
3	none
4	80@40, 327@30, 452@37, 456@266, 462@44, ProMax - QC the above channels

General / Line Comments	
SOL SP 803 S1G04 disabled, S1G05 enabled due to errors on the previous line.	
EOL SP 3351 Powered down for turtles at SP 3169 and were never able to reach full power	
SOL NOISY CHANNELS	
s1: 97, 135, 141, 143, 198, 203, 233, 292, 324, 344, 359, 386, 416, 429, 444, 462, 467	
s2: 203, 240, 313, 354 357, 375, 387, 450, 452, 460	
S3: 30, 107, 108, 111, 135, 225, 313, 316, 358, 369, 370 465	
s4: 23, 80, 186, 188, 190, 243, 327, 541-546, 462, 467, 468	
EOL NOISY CHANNELS	
s1: 97, 135, 141, 144, 203, 233, 292, 324, 344, 359, 386, 416, 423, 427, 429, 441, 444, 452, 462	
s2: 83, 203, 240, 313, 354, 357, 375, 387, 452, 460	
s3: 316, 370, 447	
s4: 23, 41, 80, 186, 188, 190, 220, 243, 268, 270, 327, 383, 451, 452, 455, 456, 458, 459, 461, 462, 468,	

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

Line	MGL1106_1148I
Sequence	049
Direction	25.9

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Time UTC	FILE	SP	Tape	Description
803	1	803	373	SOL S1, S2, S3, S4 Gun 05 enabled, S1, S2, S3, S4, Gun 04 disabled
805	10	813	373	Renabling guns S2, S3, S4, Gun 04, disabling Guns S2, S3, S4, Gun 05, S2G04 Timing Err
805	11	814	373	S3G04 Timing Err
806	12	815	373	S2G04 Timing Err
806	13	816	373	S3G04, S4G04 Timing Err
806	15	818	373	S4G04 Timing Err
918	328	1130	374	Reel change
1031	655	1457	375	Reel change
1142	963	1765	375	Power Down Turtle; no source
1143	964-965	1766-1767	375	S1, S2, S3, S4 G10 still enabled
1144	966	1768	375	No Source
1146	977-978	1779-1780	375	No Source
1146	979	1781	375	Resume full power; S1G09 Timing Err
1146	980	1782	375	S4G09 Timing Err
1146	981	1783	375	S1G09 Timing Err
1147	982	1784	376	S4G09 Timing Err; Reel Change
1147	982	1784	376	Reel Change
1247	1250-1253	2052-2055	376	Power Down Turtle; no source
1257	1293	2094	376	Begin Ramp up 100 cu in
1301	1309	2111	377	Reel change
1302	1314	2116	377	Ramp up 190 cu in
1304	1322	2124	377	Power Down Turtle; no source
1310	1351	2153	377	Resume Ramp up 190 cu in
1315	1373	2175	377	Ramp up 410 cu in
1315	1374	2176	377	S4G09 Timing Err
1320	1395	2197	377	S1G04 Timing Err
1320	1396	2198	377	S4G04 No fire, S4G10 Timing Err
1320	1397	2199	377	Ramp up 810 cu in, S1G10 Timing err
1325	1417-1420	2219-2222	377	No Source
1326	1421	2223	377	Ramp up 1650 cu in
1330	1439	2241	377	No Source
1330	1440	2242	377	Full Source, S3G10 Timing Err
1330	1442	2244	377	S3G10 Timing Err
1412	1636	2438	378	Reel change
1524	1963	2765	379	Reel change
1634	2290	3092	380	Reel change
1650	2368-2369	3170-3171	380	Power Down Turtle; no source
1700	2415	3217	380	Ramp up 100 cu in
1705	2440	3242	380	Ramp up 190 cu in
1710	2465	3267	380	Ramp up 410 cu in
1714	2487-2488	3289-3290	380	Power Down Turtle; no source
1724	2537	3339	380	Shut down dolphins
1727	2549	3351	380	EOL

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

	SOL	EOL		
Tape #	381	385	FGSP	3145
SP #	3224	903	LGSP	903

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	5/2/11	5/3/11
Time UTC	1950	0218
Volume (cu in.)	410/410	3300/3300
Wind (kts)	5 SW	4 SW
Sea State (ft)	calm	CALM
Water Depth (m)	61.8	2287

Cable	EOL High Noise Channels (in u-bar)
1	
2	
3	
4	

ProMax - QC the above channels

General / Line Comments
SOL SP 3224, FGSP 3154 - Line paused sp 2280
EOL SP 903 - Line ended for turn noise
SOL NOISY CHANNELS
s1: 97, 135, 141, 144, 203, 233, 292, 324, 344, 359, 386, 416, 423, 427, 429, 441, 444, 452, 462
s2: 83, 203, 240, 313, 354, 357, 375, 387, 452, 460
s3: 316, 370, 447
s4: 23, 41, 80, 186, 188, 190, 220, 243, 268, 270, 327, 383, 451, 452, 455, 456, 458, 459, 461, 462, 468,
EOL NOISY CHANNELS
EOL NOISY CHANNELS UNAVAILABLE - LINE ENDED DURING TURN WITH NOISE PRESENT ON STREAMERS

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

Line	MGL1106_1268R
Sequence	050
Direction	205.9

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

	SOL	EOL		
Tape #	386	391	FGSP	1644
SP #	1644	3351	LGSP	3351

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	5/3/11	5/3/11
Time UTC	0602	1202
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	5N	5NE
Sea State (ft)	1-3	2
Water Depth (m)	1246	79

Cable	EOL High Noise Channels (in u-bar)
1	141@53, 203@38, 233@32, 359@33, 386@31, 429@31, 444@48
2	none
3	316 @92
4	80@95, 186@41, 188@51, 243@60, 327@66, 451@112, 453@60, 456@253, 462@75

ProMax - QC the above channels

General / Line Comments	
SOL SP 1644	
EOL SP 3351	
SOL NOISY CHANNELS	
s1: 97, 135, 141, 143, 183, 195, 203, 233, 292, 324, 359, 386, 416, 429, 444	
s2: 100, 203, 240, 354, 357, 387, 452, 460	
s3: 30, 107, 108, 135, 225, 313, 358, 370	
s4: 10, 41, 80, 186, 188, 190, 243, 268, 270, 327, 383, 451-451, 455, 456, 458, 454, 462, 468	
EOL NOISY CHANNELS	
s1: 97, 135, 141, 143, 203, 233, 324, 344, 359, 386, 416, 429, 444, 462, 467	
s2: 83, 203, 240, 324, 357, 375, 387, 452, 460	
s3: 30, 111, 135, 135, 313, 316, 358, 370	
s4: 23, 41, 80 186, 188, 190, 220, 239, 243, 268-270, 327, 382, 383, 399, 451-459, 461, 462, 468	

Chief Science Officer	Robert Steinhaus		
Science Officer	Anthony Johnson	David Martinson	
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00	
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00	

Line	MGL1106_1124R
Sequence	051
Direction	25.9

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

	SOL	EOL		
Tape #	392	399	FGSP	3378
SP #	3378	873	LGSP	873

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	5/3/11	5/3/11
Time UTC	1352	2146
Volume (cu in.)	3300/3300	3300/300
Wind (kts)	Calm	calm
Sea State (ft)	2	1-3
Water Depth (m)	67	2279

Cable	EOL High Noise Channels (in u-bar)
1	141-54, 203-41, 233-33, 359-34, 386-31, 429-31, 444-47, 452-32
2	100-44, 373-38
3	107-31, 316-75, 358-37, 370-75, 465-35
4	456-111

ProMax - QC the above channels

General / Line Comments	
SOL SP 3378	
EOL SP 873	
SOL NOISY CHANNELS	
s1: 97, 135, 141, 143, 203, 233, 324, 344, 359, 386, 416, 429, 444, 462, 467	
s2: 83, 203, 240, 324, 357, 375, 387, 452, 460	
s3: 30, 111, 135, 135, 313, 316, 358, 370	
s4: 23, 41, 80 186, 188, 190, 220, 239, 243, 268-270, 327, 382, 383, 399, 451-459, 461, 462, 468	
EOL NOISY CHANNELS	
s1: 97, 135, 138, 141, 203, 233, 324, 344, 359, 386, 416, 427, 429, 444, 452	
s2: 100, 203, 240, 313, 354, 357, 375, 387, 450, 452, 460	
s3: 30, 10, 108 111, 135, 140, 205, 313, 316, 358, 369, 370, 464, 465	
s4: 23, 80, 186, 188, 190, 220, 243, 327, 456, 462, 467, 468	

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

Line	MGL1106_1252R
Sequence	052
Direction	205.9

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

	SOL	EOL		
Tape #	400	404	FGSP	2271
SP #	2771	873	LGSP	873

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	5/3/11	5/5/11
Time UTC	2202	0230
Volume (cu in.)	3300/3300	2760/3300
Wind (kts)	7 sw	7 sw
Sea State (ft)	1-3	calm
Water Depth (m)	434	2279

Cable	EOL High Noise Channels (in u-bar)
1	141-43, 203-41, 233-34, 324-111, 359-33, 386-34, 429-31
2	100-44, 313-167
3	316-33
4	456-191

ProMax - QC the above channels

General / Line Comments	
SOL	SP 2271 - 2253 to 2249 SHOTS lost due to spectra lockup
EOL	SP 873 Ending volume 2760/3300
SOL NOISY CHANNELS	
s1:	97, 135, 138, 141, 203, 233, 324, 344, 359, 386, 416, 427, 429, 444, 452
s2:	100, 203, 240, 313, 354, 357, 375, 387, 450, 452, 460
s3:	30, 10, 108 111, 135, 140, 205, 313, 316, 358, 369, 370, 464, 465
s4:	23, 80, 186, 188, 190, 220, 243, 327, 456, 462, 467, 468
EOL NOISY CHANNELS	
s1:	97, 135, 141, 203, 233, 291, 292, 324, 344, 359, 386, 416, 427, 429, 444, 452
s2:	83, 100, 203, 240, 313, 354, 357, 375, 387, 452, 460
s3:	316, 411, 437 462-468
s4:	80, 186, 188 190, 243, 327, 452, 453, 455, 456, 461, 462, 465, 468

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

Line	MGL1106_1244R
Sequence	053
Direction	205.9

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	405	412	FGSP	878
SP #	878	3351	LGSP	3351

Line	MGL1106_1108T
Sequence	054
Direction	25.9

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	5/5/11	5/5/11
Time UTC	0425	1317
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	7 NW	5N
Sea State (ft)	calm	1
Water Depth (m)	2371	80

Cable	EOL High Noise Channels (in u-bar)
1	141@53, 203@42, 233@34, 324@134, 359@34, 386@34, 429@32
2	100 @44
3	none
4	456 @183

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 878
EOL SP 3351
SOL NOISY CHANNELS
s1: 97, 135, 141, 203, 233, 291, 292, 324, 344, 359, 386, 416, 427, 429, 444, 452
s2: 83, 100, 203, 240, 313, 354, 357, 375, 387, 452, 460
s3: 316, 411, 437 462-468
s4: 80, 186, 188 190, 243, 327, 452, 453, 455, 456, 461, 462, 465, 468
EOL NOISY CHANNELS
s1: 97, 135, 141, 144, 203, 233, 291, 292, 324, 344, 359, 386, 416, 423, 429, 441, 444, 452, 462, 468
s2: 83, 100, 203, 240, 354, 357, 375, 387, 452, 460
s3: 205, 316
s4: 80, 186, 188, 243, 327, 452, 453, 456, 461, 462, 464, 465, 467, 468

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Time UTC	FILE	SP	Tape	Description
0425	1	878	405	SOL
0527	284	1161	405	P2 Not logging!!!
0529	297	1174	405	P2 Logging restored
0536	328	1204	406	Reel Change
0556	419	1296	406	S1G02 Auto fire err
0557	422	1299	406	S1G01 Auto fire err
0603	447	1324	406	S1G01 Auto fire err
0604		1339	406	S1G02 Auto fire err
0608		1346	406	S1G01 Auto fire err
0617	507	1384	406	S1G05 Auto fire err
0618	513	1390	406	S1G05 Auto fire err
0618	515	1392	406	S1G05 Auto fire err
0622	531	1408	406	S1G05 Auto fire err
0626	551	1427	406	S1G05 Comm Err
0627	553	1429	406	S1G05 Comm Err
0627	554	1431	406	S1G05 Comm Err
0628	556	1433	406	S1G05 Comm Err
0628	557	1434	406	S1G05 Auto fire err
0628	559	1436	406	S1G05 Auto fire err
0629	560	1437	406	S1G05 Comm Err, S2G05 Timing err
0629	562	1439	406	S1G05 Comm Err, S2G05 Timing err
0630	564	1441	406	S1G05 Comm Err
0630	566	1443	406	S1G05 Comm err
0630	568	1445	406	STBD Source volume 2760 cu in, S1G01, 02, 05 disabled, S2G05 enabled.
0650	655	1532	407	Reel Change
0655	675	1552	407	S1G04 Auto Fire err
0656	678	4555	407	S1G04 Auto Fire err
0656	680	1557	407	S1G04 Auto Fire err
0658	688	1565	407	S1G06 Comm Err
0658	689	1566	407	S1G04 Auto fire err
0658	690	1567	407	S1G04 Comm err
0659	692	1569	407	S1G04 Comm err
0659	696	1573	407	S1G04 Comm err
0700	697	1574	407	S1G04 Comm err
0701	702	1579	407	S1G04 Comm err
0701	704	1581	407	S1G04 Comm err
0705	708	1585	407	S1G04 Comm err
0704	716	1593	407	S1G04 Comm err
0705	722	1599	407	S1G04 Comm err
0707	728	1605	407	Comm err/auto fire err on S1G04,06,08 every odd shot from here out
0732	844	1721	407	S1G06 Timing Err
0738				S1G07 has started having comm err too
0747	908	1785	407	S1G09 has started having comm errs too
0803	982	1859	408	Reel Change
0916	1309	2186	409	Reel Change
957	1504	2381	409	S1G10 has started having comm errs too
1003	1528	2405	409	S1G03 has started having comm errs too

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

	SOL	EOL		
Tape #	413	420	FGSP	3427
SP #	3427	873	LGSP	873

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	5/5/11	5/6/11
Time UTC	1511	0001
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	calm	14 SW
Sea State (ft)	1	3-5
Water Depth (m)	66	2297

Cable	EOL High Noise Channels (in u-bar)
1	
2	
3	
4	

ProMax - QC the above channels

General / Line Comments
SOL SP 3427
EOL SP 873
SOL NOISY CHANNELS
s1: 97, 135, 141, 144, 203, 233, 291, 292, 324, 344, 359, 386, 416, 423, 429, 441, 444, 452, 462, 468
s2: 83, 100, 203, 240, 354, 357, 375, 387, 452, 460
s3: 205, 316
s4: 80, 186, 188, 243, 327, 452, 453, 456, 461, 462, 464, 465, 467, 468
EOL NOISY CHANNELS
EOL Noise tests postponed for XBT - Will conduct on Run-in to next line

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

Line	MGL1106_1244S
Sequence	055
Direction	205.9

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

	SOL	EOL		
Tape #	421	428	FGSP	912
SP #	912	3351	LGSP	3351

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	5/6/11	5/6
Time UTC	0210	1110
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	8ssw	9N
Sea State (ft)	3-5	2
Water Depth (m)		89

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

Line	MGL1106_1068R
Sequence	056
Direction	25.9

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Cable	EOL High Noise Channels (in u-bar)
1	141@53 203@42 233@35 324@136 359@33 386@33 429@31
2	100@44 313@38
3	30@34 106@64 316@99 358@50 370@75
4	452@42 455@45 456@413 462@30

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 912
EOL SP 3351
SOL NOISY CHANNELS
s1: 97, 135, 141, 144, 203, 233, 291, 292, 324, 344, 359, 386, 416, 423, 429, 441, 444, 452, 462, 468
s2: 83, 100, 203, 240, 354, 357, 375, 387, 452, 460
s3: 205, 316
s4: 80, 186, 188, 243, 327, 452, 453, 456, 461, 462, 464, 465, 467, 468
EOL NOISY CHANNELS
s1: 97, 135, 141, 143, 203, 233, 324, 344, 359, 386, 416, 423, 427, 429, 441, 444, 452, 462, 468
s2: 83, 100, 203, 240, 313, 354, 357, 375, 387, 452, 457, 460, 462, 465-467
s3: 30, 97, 106-108, 111, 135, 190, 205, 272, 313, 316, 352, 358, 366, 369, 370, 437, 462, 464, 468
s4: 23, 80, 186, 188, 190, 243, 327, 452-458, 461-468

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	429	436	FGSP	3406
SP #	3406	873	LGSP	873

Line	MGL1106_1212S
Sequence	057
Direction	205.9

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	5/6/11	5/6/11
Time UTC	1311	2238
Volume (cu in.)	3300/3300	3240/3300
Wind (kts)	2SW	5 N
Sea State (ft)	2	3
Water Depth (m)	72	2288

Cable	EOL High Noise Channels (in u-bar)
1	141-54, 203-41, 233-34, 324-32, 259-34, 386-33, 429-31,444-34
2	100-45, 213-35, 313-38
3	316-87
4	451-33, 452-89, 462-36

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 3406
EOL SP
SOL NOISY CHANNELS
s1: 97, 135, 141, 143, 203, 233, 324, 344, 359, 386, 416, 423, 427, 429, 441, 444, 452, 462, 468
s2: 83, 100, 203, 240, 313, 354, 357, 375, 387, 452, 457, 460, 462, 465-467
s3: 30, 97, 106-108, 111, 135, 190, 205, 272, 313, 316, 352, 358, 366, 369, 370, 437, 462, 464, 468
s4: 23, 80, 186, 188, 190, 243, 327, 452-458, 461-468
EOL NOISY CHANNELS
s1: 97, 135, 141, 213, 203, 233, 292, 324, 344, 359, 386, 416, 417, 429, 444
s2: 100, 203, 213, 240, 313, 354, 359, 375, 387, 450, 451, 455, 460
s3: 30, 108, 135, 313, 316
s4: 41, 80, 186, 188, 190, 245, 327, 451, 452, 455, 461, 462, 468

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

	SOL	EOL		
Tape #	437	439	FGSP	898
SP #	898	1807	LGSP	1807

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	5/7/11	5/7/11
Time UTC	0032	0345
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	11 NW	NA
Sea State (ft)	4-6	NA
Water Depth (m)	2432	NA

Cable	EOL High Noise Channels (in u-bar)
1	
2	
3	
4	

ProMax - QC the above channels

General / Line Comments
SOL SP 878 - AB20 Not responding, stable at 8.2m
EOL SP 1807 Spectra Restarted - EOL Abrupt
SOL NOISY CHANNELS
s1: 97, 135, 141, 213, 203, 233, 292, 324, 344, 359, 386, 416, 417, 429, 444
s2: 100, 203, 213, 240, 313, 354, 359, 375, 387, 450, 451, 455, 460
s3: 30, 108, 135, 313, 316
s4: 41, 80, 186, 188, 190, 245, 327, 451, 452, 455, 461, 462, 468
EOL NOISY CHANNELS
NOT VALID - LINE IMMEDIATELY CONTINUES - SEE SEQUENCE 059

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

Line	MGL1106_1052R
Sequence	058
Direction	25.9

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	439	444	FGSP	1839
SP #	1839	3351	LGSP	3351

Line	MGL1106_1052R1
Sequence	059
Direction	25.9

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	5/7/11	5/7/11
Time UTC	0345	0917
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	NA	calm
Sea State (ft)	NA	2
Water Depth (m)	NA	90

Cable	EOL High Noise Channels (in u-bar)
1	141@52 203@41 233@33 324@129 359@35 386@33 429@31 444@32
2	100@44 313@38
3	205@78 316@55 370@37
4	80@51 327@36 462@37

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 1839 Line started after Spectra Restart
EOL SP 3351
SOL NOISY CHANNELS: From start of line 58, test not run before this line.
s1: 97, 135, 141, 213, 203, 233, 292, 324, 344, 359, 386, 416, 417, 429, 444
s2: 100, 203, 213, 240, 313, 354, 359, 375, 387, 450, 451, 455, 460
s3: 30, 108, 135, 313, 316
s4: 41, 80, 186, 188, 190, 245, 327, 451, 452, 455, 461, 462, 468
EOL NOISY CHANNELS
s1: 97, 135, 141, 143, 203, 233, 324, 344, 359, 386, 416, 423, 429, 441, 444, 452, 462, 463, 468
s2: 100, 203, 240, 313, 354, 357, 375, 387, 452, 460, 462, 465-467
s3: 20, 106-108, 135, 205, 316, 358, 366, 369, 370, 463, 464
s4: 23, 41, 80, 186, 188, 190, 220, 243, 327, 382, 383, 427, 452, 459, 461, 462, 465-468

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	445	452	FGSP	3395
SP #	3395	873	LGSP	873

Line	MGL1106_1220R
Sequence	060
Direction	205.9

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	5/7/11	5/7/11
Time UTC	1114	2020
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	calm	SW 5
Sea State (ft)	2	1-3
Water Depth (m)	72	2293

Cable	EOL High Noise Channels (in u-bar)
1	141-52, 203-41, 233-34, 324-128, 359-33, 316-32
2	100-45
3	316-77
4	none over 30u

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 3395 AB20 Fixed wing angle 9.9 ,BB07 lost comms, BB19 Fixed wing angle 0.0, CB04 Lost comms
EOL SP 873 AB20 Fixed wing angle 9.9 ,BB07 lost comms, BB19 Fixed wing angle 0.0, CB04 Lost comms
SOL NOISY CHANNELS
s1: 97, 135, 141, 143, 203, 233, 324, 344, 359, 386, 416, 423, 429, 441, 444, 452, 462, 463, 468
s2: 100, 203, 240, 313, 354, 357, 375, 387, 452 460, 462, 465-467
s3: 20, 106-108, 135, 205, 316, 358, 366, 369, 370, 463, 464
s4: 23, 41, 80, 186, 188, 190, 220, 243, 327, 382, 383, 427, 452, 459, 461, 462, 465-468
EOL NOISY CHANNELS
s1: 97, 135, 141, 143, 197, 203, 233, 291, 292, 324, 344, 359, 386, 416, 417, 429, 444, 462
s2: 83, 100, 203, 240, 354, 357, 387, 452, 460
s3: 30, 107, 135, 313, 316, 369, 370
s4: 23, 80, 186, 188, 190, 243, 327, 383, 462, 467, 468

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	453	460	FGSP	883
SP #	883	3351	LGSP	3351

Line	MGL1106_1012R
Sequence	061
Direction	25.9

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	5/7/11	5/8/11
Time UTC	2246	0739
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	calm	calm
Sea State (ft)	1-3	1
Water Depth (m)	2488	102

Cable	EOL High Noise Channels (in u-bar)
1	141@53 203@41 233@35 324@137 359@34 386@33 429@32 444@30 462@33
2	none
3	107@57 316@30 370@55 369@35
4	186@42 188@52 243@61 327@72 383@36 451@215 452@191 455@50 459@48 461@49 462@142

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

Cable 4 EOL High Noise Chann 80@107 186@42 188@52 243@61 327@72 383@36 451@215 452@191 455@50 459@48 461@49 462@142

General / Line Comments	
SOL SP 883 AB20 Fixed wing angle 9.9 ,BB07 lost comms, BB19 Fixed wing angle 0.0, CB04 Lost comms	
EOL SP 3351 AB20 Fixed wing angle 9.9 and lost comms ,BB07 lost comms, BB19 Fixed wing angle 0.0, CB04 Lost comms	
SOL NOISY CHANNELS	
s1: 97, 135, 141, 143, 197, 203, 233, 291, 292, 324, 344, 359, 386, 416, 417, 429, 444, 462	
s2: 83, 100, 203, 240, 354, 357, 387, 452, 460	
s3: 30, 107, 135, 313, 316, 369, 370	
s4: 23, 80, 186, 188, 190, 243, 327, 383, 462, 467, 468	
EOL NOISY CHANNELS	
s1: 97, 135 141, 143, 203, 233, 292, 324, 344, 359, 386, 416, 423, 429, 441, 444, 462, 465, 467, 468	
s2: 83, 203, 240, 354, 357, 364, 364, 375, 378, 381-383, 387, 450, 453, 460, 465	
s3: 30, 95, 106-108, 135, 316, 366, 369, 370, 462-464	
s4: 23, 28, 80, 186, 188, 190, 219, 220, 239, 243, 268-270, 327, 382, 383, 399, 401, 427, 451-459, 461, 462, 465, 466	

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

	SOL	EOL		
Tape #	461	468	FGSP	3418
SP #	3418	873	LGSP	873

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	5/8/11	5/8/11
Time UTC	0925	1921
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	Calm	12 NE
Sea State (ft)	1	3
Water Depth (m)	80	2301

Cable	EOL High Noise Channels (in u-bar)
1	
2	
3	
4	

ProMax - QC the above channels

General / Line Comments
SOL SP 3418 AB20 Fix angle 9.9, BB07 lost coms, BB19 3.8m fix angle 0.0, BB205.7m, CB04 lost coms
EOL SP 873 AB20 Fix angle 9.9, BB07 lost coms, BB19 3.8m fix angle 0.0, BB205.7m, CB04 lost coms
SOL NOISY CHANNELS
s1: 97, 135 141, 143, 203, 233, 292, 324, 344, 359, 386, 416, 423, 429, 441, 444, 462, 465, 467, 468
s2: 83, 203, 240, 354, 357, 364, 364, 375, 378, 381-383, 387, 450, 453, 460, 465
s3: 30, 95, 106-108, 135, 316, 366, 369, 370, 462-464
s4: 23, 28, 80, 186, 188, 190, 219, 220, 239, 243, 268-270, 327, 382, 383, 399, 401, 427, 451-459, 461, 462, 465, 466
EOL NOISY CHANNELS
EOL NOT CONDUCTED AT EOL - WILL PERFORM CHANNEL TESTS DURING TURN FOR NEXT LINE SOL

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

Line	MGL1106_1164R
Sequence	062
Direction	205.9

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
	N.T.B.P. - Not To Be Processed

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

	SOL	EOL		
Tape #	469	476	FGSP	868
SP #	868	3351	LGSP	3351

Line	MGL1106_1036R
Sequence	063
Direction	25.9

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	5/8/11	5/9/11
Time UTC	2129	92
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	9 NW	15SW
Sea State (ft)	1-3	2-3
Water Depth (m)	2459	92

Cable	EOL High Noise Channels (in u-bar)
1	141@53 203@41 233@36 324@134 359@35 386@33 429@32 444@42 462@33
2	313 @37
3	107@51 205@33 316@46 370@66
4	80@46 327@32

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 868 AB20 Fix angle 9.9, BB07 lost coms, BB19 3.8m fix angle 0.0, BB205.7m, CB04 lost coms
EOL SP 3351
SOL NOISY CHANNELS
s1: 97, 135 141, 143, 203, 233, 292, 324, 344, 359, 386, 416, 423, 429, 441, 444, 462, 465, 467, 468
s2: 83, 203, 240, 354, 357, 364, 364, 375, 378, 381-383, 387, 450, 453, 460, 465
s3: 30, 95, 106-108, 135, 316, 366, 369, 370, 462-464
s4: 23, 28, 80, 186, 188, 190, 219, 220, 239, 243, 268-270, 327, 382, 383, 399, 401, 427, 451-459, 461, 462, 465, 466
EOL NOISY CHANNELS
s1: 97, 135, 141, 143, 203, 233, 292, 324, 344, 359, 386, 416, 423, 429, 441, 444, 460-463, 465-468
s2: 83, 203, 240, 313, 354, 357, 375, 387, 421, 452, 460, 462-468
s3: 30, 106, 107, 205, 316, 369, 370, 457-468
s4: 41, 80, 186, 188, 190, 220, 243, 327, 382, 383, 427, 451, 452, 453, 459, 461-468

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

	SOL	EOL		
Tape #	477	484	FGSP	3394
SP #	3394	1003	LGSP	1003

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	5/9/11	5/9/11
Time UTC	759	1758
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	8s	9 S
Sea State (ft)	2-3	3-5
Water Depth (m)	76	2430

Cable	EOL High Noise Channels (in u-bar)
1	
2	
3	
4	

ProMax - QC the above channels

General / Line Comments
SOL SP 3394 AB20 Fix angle 9.9 lost coms, BB07 lost coms, BB19 fix fin angle 0.0, CB04 lost coms
EOL SP 1003 AB20 Fix angle 9.9 lost coms, BB07 lost coms, BB19 fix fin angle 0.0, CB04 lost coms
SOL NOISY CHANNELS
s1: 97, 135, 141, 143, 203, 233, 292, 324, 344, 359, 386, 416, 423, 429, 441, 444, 460-463, 465-468
s2: 83, 203, 240, 313, 354, 357, 375, 387, 421, 452, 460, 462-468
s3: 30, 106, 107, 205, 316, 369, 370, 457-468
s4: 41, 80, 186, 188, 190, 220, 243, 327, 382, 383, 427, 451, 452, 453, 459, 461-468
EOL NOISY CHANNELS
Turned early for Next Line Run In - NO EOL Noise test performed - Will conduct on next line Run in

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

Line	MGL1106_1172R
Sequence	064
Direction	205.9

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
	N.T.B.P. - Not To Be Processed

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

	SOL	EOL		
Tape #	485	488	FGSP	948
SP #	892	2159	LGSP	2159

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	5/9/11	5/10/11
Time UTC	2053	0107
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	S 9	W 12
Sea State (ft)	2-4	1-3
Water Depth (m)	2383	493

Cable	EOL High Noise Channels (in u-bar)
1	
2	
3	
4	

ProMax - QC the above channels

General / Line Comments
SOL SP 892 AB20 Fix angle 9.9 lost coms, BB07/CB04 lost coms, BB19 fix fin angle 0.0, High spot walking down cable AB10-15 birds at 3m
EOL SP 2159 AB20 Fixed Fin 9.9 no comm, BB07/CB04 lost coms, BB19 Fix fin 0.0, transition to MGL1106_1012
SOL NOISY CHANNELS
s1: 97, 135, 141, 143, 203, 233, 291, 292, 324, 344, 359, 386, 416, 429, 444
s2: 203, 240, 357, 375, 450, 452
s3: 30, 107, 135, 313, 316, 387, 450-454, 460
s4: 23, 80, 186, 188, 190, 243, 327, 383, 446, 456, 462, 465-468
EOL NOISY CHANNELS
Line ended with no noise test - Transitioning immediately to MGL1106_1012i

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

Line	MGL1106_1100i
Sequence	065
Direction	25.9

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

	SOL	EOL		
Tape #	489	491	FGSP	2470
SP #	2470	3351	LGSP	3351

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	5/10/11	5/10/11
Time UTC	0221	0518
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	N 14	NW 10
Sea State (ft)	2-4	2-4
Water Depth (m)	113	103

Cable	EOL High Noise Channels (in u-bar)
1	141-54, 203-40, 233-35, 324-139, 359-35, 386-33, 429-51, 444-35, 46-53
2	313-39
3	316-136
4	456-88

ProMax - QC the above channels

General / Line Comments
SOL SP 2470 AB20 Fixed Fin 9.9 no comm, BB07/CB04 lost coms, BB19 Fix fin 0.0, BB01-BB10 OUT OF SPEC ~12M
EOL SP
SOL NOISY CHANNELS from PREVIOUS LINE
s1: 97, 135, 141, 143, 203, 233, 291, 292, 324, 344, 359, 386, 416, 429, 444
s2: 203, 240, 357, 375, 450, 452
s3: 30, 107, 135, 313, 316, 387, 450-454, 460
s4: 23, 80, 186, 188, 190, 243, 327, 383, 446, 456, 462, 465-468
EOL NOISY CHANNELS
s1: 97, 135, 141, 143, 203, 233, 291, 292, 324, 344, 359, 386, 416, 422, 423, 425, 428, 429, 441, 444, 453, 462
s2: 203, 240, 313, 354, 357, 375, 387, 452
s3: 27, 107, 135, 205, 225, 313, 369, 378, 438
s4: 80, 186, 188, 190, 243, 296, 327, 383, 453, 456, 457

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

Line	MGL1106_1012i
Sequence	066
Direction	25.9

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

	SOL	EOL		
Tape #	492	499	FGSP	3374
SP #	3374	1039	LGSP	1039

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	5/10/11	5/10/11
Time UTC	0740	1741
Volume (cu in.)	3300/300	3300/3300
Wind (kts)	6NW	Calm
Sea State (ft)	2	2
Water Depth (m)	68	2466

Cable	EOL High Noise Channels (in u-bar)
1	
2	
3	
4	

ProMax - QC the above channels

General / Line Comments
SOL SP 3374 AB20 Lost coms, BB07 lost coms, BB19 fails commands, CB4 lost coms, AB14, BB16,17 lost coms intermittently
EOL SP 1039 3374 AB20 Lost coms, BB07 lost coms, BB19 fails commands, CB4 lost coms, AB14, BB16,17 lost coms intermittently
SOL NOISY CHANNELS
s1: 97, 135, 141, 143, 203, 233, 291, 292, 324, 344, 359, 386, 416, 422, 423, 425, 428, 429, 441, 444, 453, 462
s2: 203, 240, 313, 354, 357, 375, 387, 452
s3: 27, 107, 135, 205, 225, 313, 369, 378, 438
s4: 80, 186, 188, 190, 243, 296, 327, 383, 453, 456, 457
EOL NOISY CHANNELS
Not run, turn started before EOL

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

Line	MGL1106_1220J
Sequence	067
Direction	205.9

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
	N.T.B.P. - Not To Be Processed

Observers Log

Vessel	R/V Marcus G Langseth
Client	Nathan Bangs
Area	CRISP MCS 3D Costa Rica
Job Number	MGL1106

	SOL	EOL		
Tape #	500	507	FGSP	894
SP #	894	3300	LGSP	3300

Streamer Parameters				
	1	2	3	4
Length (m)	6000	6000	6000	6000
Auxiliaries				
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	167	167	167	167
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Description	SOL/FQCSP	EOL/LQCSP
FSID		
Date MM/DD/YY	5/10/11	5/11/11
Time UTC	2100	0533
Volume (cu in.)	3300/3300	3300/3300
Wind (kts)	N 5	NW 8
Sea State (ft)	1-3	calm
Water Depth (m)	2377	70

Chief Science Officer	Robert Steinhaus	
Science Officer	Anthony Johnson	David Martinson
Acquisition Leader	Bern Mckiernan - 00:00-12:00	Ryan Eaton- 12:00-24:00
Navigation Leader	David Ng-Li - 00:00-12:00	Mike Martello - 12:00-24:00

Line	MGL1106_1140I
Sequence	068
Direction	25.9

Source Parameters	
Total Volume	3300/in3
Work Pressure	1950psi +/- 100psi
Dual Source	Yes
Depth	7m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	8s
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Cable	EOL High Noise Channels (in u-bar)
1	141-52, 203-41, 233-36, 324-135, 359-34, 386-32
2	100-45, 313-37
3	316-43
4	none

ProMax - QC the above channels

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
SOL SP 894 AB20 Lost coms, BB7 lost coms, CB4 lost coms, BB19/CB5 Open Loop, AB13/14 losing coms intermittently
EOL SP 3300 AB20 Lost coms, BB7 lost coms, CB4 lost coms, BB19/CB5 Open Loop, AB13/14 losing coms intermittently
SOL NOISY CHANNELS
s1: 40, 41, 97, 135, 141, 143, 154, 197, 203, 233, 291, 292, 324, 344, 359, 386, 416, 417, 429, 444, 462
s2: 83, 109, 203, 240, 354, 357, 378, 387, 450-454, 460
s3: 30, 316
s4: 23, 41, 80, 123, 186, 188, 190, 220, 243, 268, 327, 383, 452, 456, 459, 462, 467, 468
EOL NOISY CHANNELS
s1: 97, 135, 141, 143, 203, 233, 291, 292, 324, 344, 359, 386, 416, 429, 444, 462
s2: 83, 100, 203, 240, 313, 354, 357, 375, 38, 452, 460, 464, 465, 466
s3: 316, 447
s4: 80, 186, 188, 190, 243, 327, 383, 462, 464-468

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	FFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

