

Observers Log

Vessel	Marcus G. Langseth
Client	USGS
Area	Bering Sea, Alaska
Job Number	MGL1111 (USGS 2)

Chief Science Officer	David Martinson		
Science Officer	Bern McKiernan		
Acquisition Leader	Mark Wooley - 12:00-24:00	Bern McKiernan 00:00-12:00	
Navigation Leader	David Ng 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	001	006	FGSP	719
SP #	719	3505	LGSP	3505

Line	MGL1111_MCS01
Sequence	001
Direction	312.5

Streamer Parameters				
	1	2	3	4
Length (m)	8100			
Auxiliaries				
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	???			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600/in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	16sec
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	08/11/11	8/11/11
Time UTC	0000	1606
Volume (cu in.)	?????	6420
Wind (kts)	7 kts	20
Sea State (ft)	0.5m	2m
Water Depth (m)	3762.3	3780

Cable	EOL High Noise Channels (in u-bar)
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 3505 EOL Lat. 55 59' 54.420 Long 178 29' 54.483
SOL NOISY CHANNELS
EOL NOISY CHANNELS

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
00:00	001	719	001	First good sp
00:29	084	802	001	First full power sp
01:33	272	991	001	Delta error S3G02
01:35	273	992	001	Delta error S3G02
01:39	191	1010	001	Comm error S3G07
01:46	211	1030	001	No Fire S2G03
01:52	229	1048	001	Delta error S2G03
02:16	297	1116	001	No Fire S2G03
02:20	309	1128	001	No fire S2G03
02:48	483	1201	002	Tape change
05:14	924	1642	002	Comm error S3G10
05:29	965	1683	003	Tape change
05:31	977	1695	003	Comm error S3G06
07:32	1347	2065	003	Comm error S3G05
07:33	1350	2068	003	Comm error S3G06
0755	1417	2134	003	Comm error S3G07
0805	1447	2165	004	Tape change
0806	1450	2168	004	Comm error S3G07
0927	1677	2395	004	Comm error S3G06
0942	1720	2438	004	Comm error S3G06
1026	1841	2559	004	CE S3G09
1057	1929	2647	005	Tape change
1116	1983	2701	005	Comm error S3G08
1205	2124	2842	005	CE S3G06
1215	2154	2872	005	CE S3G09
1347	2412	3130	006	Tape change
1400	2448	3166	006	auto fire S2G01 111.9 ms
1441	2560	3278	006	Comm error S3G06
1453	2593	3311	006	auto fire S2G01 105.9 ms
1500	2610	3328	006	auto fire S2G01 853.7 ms
1526	2681	3399	006	Auto fires and failres of S2G01 SP3399-3449
1546	2733	3451	006	Disabled S2G01 enabled S2G05 new volume 6420 in3
1550	2745	3463	006	Disabled 2Hz filter on streamer
1606	2787	3505	006	EOL Lat Lat. 55 59' 54.420 Long 178 29' 54.483

Observers Log

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Chief Science Officer	David Martinson		
Science Officer	Bern McKiernan		
Acquisition Leader	Mark Wooley - 12:00-24:00	Bern McKiernan 00:00-12:00	
Navigation Leader	David Ng 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	007	011	FGSP	1007
SP #	1007	3006	LGSP	3006

Line	MGL1111 MCS1A
Sequence	002
Direction	294

Streamer Parameters	1	2	3	4
Length (m)	8100			
Auxiliaries				
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	???			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600/in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	16sec
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	8/11/11	8/12/11
Time UTC	1608	0453
Volume (cu in.)	6420	6560
Wind (kts)	20	15
Sea State (ft)	2m	2m
Water Depth (m)	3771	3802

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

ProMax - QC the above

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 1007 Lat 56 00' 04.994 Long 178 30' 14.913					
EOL SP					
SOL NOISY CHANNELS					
EOL NOISY CHANNELS					

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFFSP - 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
1608	001	1007	007	SOL SP 1007 Lat 56 00' 04.994 Long 178 30' 14.913
1614	16	1022	007	CE S3G07
1718	190	1196	007	CE S3G07
1740	245	1255	007	power down string 3 &4 in order to pick up pam
1828	366	1372	007	S3G06 comms error
1848	413	1419	007	S2G03 comms error
1856	432	1438	007	S2G03 delta error -10.7ms
1857	433	1439	007	S2G03 delta error 8.2ms
1904	449	1455	007	S2G03 auto fire 809.8
1905	451	1457	007	S2G03 auto fire 756.6
1906	453	1459	007	S2G03 auto fire 646.3
1906	454	1460	007	S2G03 delta error 11.8
1907	455	1461	007	S2G03 delta error -8.8
1907	456	1462	007	S2G03 delta error -2.1
1911	466	1472	007	disable S2G03 and enable S1G05 volume now 3260cu ins.
1911	466	1472	007	S1G05 delta error
1912	467	1473	007	S1G05 delta error
1919	483	1489	008	tape change
1933	497	1519	008	S3G08 comm error
1942	522	1538	008	S1G02 delta error 6.4ms
1946	531	1547	008	Gun strings 3 and 4 online, Bad shot, no fire
1947	532	1548	008	S3G09, S3G10, S4G04, S4G10 delta error
1948	533	1549	008	FGSP Gun volume=6560 in3
2012	602	1618	008	S3G01=No fire
2013	603	1619	008	S3G01=No fire
2013	604	1620	008	S3G01=No fire
2013	605	1621	008	S3G01=No fire
2013	606	1622	008	S3G01=No fire
2014	607	1623	008	S3G01=No fire
2014	608	1624	008	S3G01=No fire
2014	609	1625	008	S3G01 delta error 4.6ms
2019	621	1637	008	S3G01 delta error 2.8ms
2036	677	1684	008	S3G01 delta error 2.2ms
2050	713	1720	008	S3G02 delta error 2.1ms
2058	734	1741	008	S3G02 delta error -2.1ms
2059	736	1743	008	S3G01 delta error 2.3 ms
2105	751	1758	008	S3G01 delta error 2.5ms
2110	764	1771	008	S3G01 delta error -2.1ms
2116	780	1787	008	S3G01 delta error -3.0ms
2116	781	1788	008	S3G01 delta error 3.1ms
2131	821	1838	008	S3G01 delta error -2.5ms
2131	822	1839	008	S3G01 delta error 2.3ms
2155	886	1894	008	S3G01 delta error 2.3ms
2224	965	1973	009	tape change
2242	1015	2023	009	S3G01 delta error 2.3ms
2248	1030	2038	009	S3G01 delta error 2.1ms
2253	1043	2051	009	S3G01 delta error 2.4ms

2257	1055	2063	009	S3G01 delta error 2.1ms
2313	1100	2108	009	S3G01 delta error 2.1ms
2331	1149	2157	009	S3G01 delta error -2.2ms
2340	1175	2183	009	S3G01 delta error 2.3ms
2348	1197	2205	009	S3G01 delta error 2.3ms
2348	1198	2206	009	S3G01 delta error 2.4ms
2351	1204	2212	009	S3G01 delta error -3.2ms
2354	1213	2221	009	S3G01 delta error -2.1ms
2355	1216	2224	009	S3G01 delta error 2.5ms
0001	1232	2240	009	S3G10 comm error
0012	1262	2270	009	S3G01 delta error -2.5ms
0021	1287	2295	009	S3G10 comm error
0030	1313	2321	009	S3G01 delta error 2.2ms
0046	1358	2366	009	S3G01 delta error -2.6ms
0055	1182	2390	009	S3G01 delta error 2.1ms
0120	1447	2455	010	tape change
0125	1462	2470	010	S3G06 comms error
0131	1476	2484	010	S3G01 delta error 2.3ms
0204	1561	2569	010	S3G01 delta error -3.5ms
0205	1563	2571	010	S3G01 delta error 2.1ms
0205	1564	2572	010	S3G01 delta error 2.1ms
0245	1668	2673	010	S3G01 delta error 2.1ms
0251	1681	2686	010	S3G01 delta error -2.2ms
0309	1736	2731	010	S3G01 delta error -2.3ms
0334	1800	2795	010	S3G01 delta error 2.1ms
0352	1847	2842	010	S3G01 delta error 2.3ms
0355	1855	2850	010	S3G08 comm error
0420	1905	2914	010	S3G01 delta error 3.6ms
0444	1972	2981	010	S3G01 delta error 2.1ms

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Acquisition Leader	Mark Wooley - 12:00-24:00	Bern McKiernan 00:00-12:00	
Navigation Leader	David Ng 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	012	016	FGSP	1010
SP #	1009	3139	LGSP	3139

Line	MGL1111 MCS02
Sequence	003
Direction	321

Streamer Parameters	1	2	3	4
Length (m)	8100			
Auxiliaries				
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	???			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600/in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	16sec
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	8/12/11	8/12/11
Time UTC	05:45	17:57
Volume (cu in.)	6420	6420
Wind (kts)	20	10
Sea State (ft)	2m	1m
Water Depth (m)	3771	3796

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

ProMax - QC the above

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 1009 Lat 56 00' 04.994 Long 178 30' 14.913					
EOL SP 3139					
SOL NOISY CHANNELS					
EOL NOISY CHANNELS					

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFFSP - 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	

0456	1	1009		S3G01, S3G06 delta error -2.2ms
0504	19	1028	012	S3G01, S3G06 delta error -2.2ms
0510	32	1041	012	S3G01, S3G06 delta error -2.6ms
0602	171	1180	012	S3G01, S3G06 delta error -2.6ms
0609	190	1199	012	S3G01, S3G06 delta error -2.3ms
0634	254	1263	012	S3G01, S3G06 delta error -2.3ms
0638	264	1273	012	S3G01, S3G06 delta error -2.3ms
0643	278	1287	012	S3G01, S3G06 delta error -2.4ms
0708	343	1352	012	S3G01, S3G06 delta error 2.1ms
0708	345	1354	012	S3G01, S3G06 delta error 2.2ms
0716	366	1375	012	S3G01, S3G06 delta error 2.3ms
0729	399	1408	012	S3G01, S3G06 delta error -2.5ms
0737	422	1431	012	S3G01, S3G06 delta error 2.4ms
0803	482	1501	013	tape change
0805	497	1505	013	S3G01 delta error -2.2ms
0810	509	1517	013	S3Go1 delta error -2.3ms
0815	524	1532	013	S3G10 comm error
0843	598	1606	013	S3G01 delta error -2.3
0849	613	1621	013	S3G01 delta error -2.2ms
0852	622	1630	013	S3G01 delta error -2.8ms
0853	623	1631	013	S3G01 delta error -2.1ms
0927	715	1723	013	S3G01 delta error -2.1ms
0946	768	1776	013	S3G01 delta error -2.2ms
0957	796	1804	013	S3G10 comm error
1055	955	1963	013	S1G02 comm error
1058	964	1972	014	tape change
1119	1021	2029	014	S3G01 delta error -2.4ms
1120	1024	2032	014	S3G01 delta error 2.1ms
1127	1042	2050	014	S3G01 delta error -2.1ms
1145	1090	2098	014	S3G10 comm error
1147	1095	2103	014	S3G09 comm error
1208	1152	2160	014	S3G01 delta error 2.1ms
1230	1212	2216	014	S3G09 comm error
1238	1230	2238	014	S3G01 delta error 2.1ms
1310	1314	2322	014	S3G01 delta error -2.2ms
1346	1407	2415	014	S3G01 delta error -2.5
1352	1425	2433	014	S3G06 comm error
1354	1430	2438	014	S3G01 delta error 2.1ms
1400	1446	2454	015	tape change
1404	1456	2464	015	S3G01 delta error -2.2ms
1417	1493	2501	015	S3G01 delta error -2.1ms
1432	1534	2542	015	S3G01 delta error -2.3ms
1438	1552	2560	015	S3G01 delta error -2.3ms
1443	1567	2574	015	S3G01 delta error -2.2ms
1454	1595	2603	015	S3G01 delta error -2.2ms
1515	1655	2663	015	S3G01 delta error -2.2ms
1523	1679	2687	015	S3G01 delta error -2.2ms
1532	1705	2713	015	S3G01 delta error -2.2ms
1532	1706	2714	015	S3G01 delta error -2.2ms
1539	1725	2733	015	S3G01 delta error -2.2ms
1559	1784	2792	015	S3G01 delta error -2.2ms
1601	1789	2797	015	S3G01 delta error -2.2ms
1604	1798	2806	015	S3G01 delta error -2.2ms
1634	1887	2895	015	S3G01 delta error -2.3ms
1637	1897	2905	015	S3G01 delta error -2.3ms
1641	1906	2914	015	S3G01 delta error -2.3ms
1641	1907	2915	015	S3G01 delta error -2.3ms
1648	1928	2936	016	tape change
1729	not recorded	3055	016	missed SP 3055 d/t source reconfig
1729	2048	3056	016	file shot mismatch d/t missing shot
1730	not recorded	3060	016	missed SP 3060 d/t source reconfig
1730	not recorded	3061	016	missed SP 3061 d/t source reconfig
1731	2054	3062	016	file shot mismatch d/t missing shot
1757	2131	3139	016	LSP/EOT

Observers Log

Vessel	Marcus G. Langseth
Client	USGS
Area	Bering Sea, Alaska
Job Number	MGL1111 (USGS 2)

Chief Science Officer	David Martinson		
Science Officer	Bern McKiernan		
Acquisition Leader	Mark Wooley - 12:00-24:00	Bern McKiernan 00:00-12:00	
Navigation Leader	David Ng 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	17	22	FGSP	687
SP #	687	3562	LGSP	3562

Line	MCS03
Sequence	004
Direction	220.2

Streamer Parameters				
	1	2	3	4
Length (m)	8100			
Auxiliaries				
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	???			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600/in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	16sec
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	08/12/11	8/13/11
Time UTC	2048	1445
Volume (cu in.)	6600	6240
Wind (kts)	22	10
Sea State (ft)	3-6	6
Water Depth (m)	3795	3829

Cable	EOL High Noise Channels (in u-bar)
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 687
EOL SP 3562
SOL NOISY CHANNELS
EOL NOISY CHANNELS

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
2048	1	687	17	SOL
2349	483	1169	18	tape change
0248	965	1651	19	tape change 08/13/2011
0541	1447	2133	20	tape change
0831	1929	2615	21	tape change
1145	2411	3097	22	tape change 08/13/2011
1226	2511	3199	22	S3G02 2.4 ms delta
1232	2526	3214	22	S3g08 comm error
1233	2529	3217	22	S4G01 Timing
1327	2669	3356	22	S4G01 Timing
1328	2670	3357	22	S4G01 Timing
1328	2671	3358	22	S4G01 Timing
1329	2675	3362	22	S4G01 Timing
1331	2678	3365	22	S4G01 Timing
1331	2679	3366	22	S4G01 Timing
1331	2680	3367	22	S4G01 Timing
1332	2681	3368	22	S4G01 Timing
1338	2699	3386	22	S4G01 Timing
1344	2713	3400	22	S4G01 Timing
1344	2714	3401	22	Disabled S4G01 and S4G02 enabled S4G05 and S3G05 vol in3 5880
1345	2715	3402	22	S3G05, S4G05 timing new volume 6240 in3
1345	2716	3403	22	S3G05, S4G05 timing new volume 6240 in3
1346	2717	3404	22	Good shot with new volume 6240in3
1348	2724	3411	22	S3g08 comm error
1358	2750	3437	22	S3G02 timing
1409	2781	3468	22	S3G06comm error
1412	2787	3474	22	S3g08 comm error
1425	2822	3509	22	S3G07 comm error
1434	3846	3533	22	Start of turn off line noise developing on cable
1445	2875	3562	22	EOL

Observers Log

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Client	USGS
Area	Bering Sea, Alaska
Job Number	MGL1111 (USGS 2)

Chief Science Officer	David Martinson		
Science Officer	Bern McKiernan		
Acquisition Leader	Mark Wooley - 12:00-24:00	Bern McKiernan 00:00-12:00	
Navigation Leader	David Ng 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	23	26	FGSP	1089
SP #	1089	2589	LGSP	2589

Line	MCS04
Sequence	005
Direction	5.7

Streamer Parameters				
	1	2	3	4
Length (m)	8100			
Auxiliaries				
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	???			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600/in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	16sec
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	08/13/11	8/14/11
Time UTC	1549	0026
Volume (cu in.)	6240	6240
Wind (kts)	15	11
Sea State (ft)	6	6
Water Depth (m)	3839	3811

Cable	EOL High Noise Channels (in u-bar)
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 SP1089
EOL SP 2589
SOL NOISY CHANNELS
S4G01, S4G02 disabled, errors from previous line. S4G05, S3G05 enabled volume is 6240 inch
S4G07 disabled due to no fires S2G05 enabled new volume 6300 in3 SP1336
Power down for seal. UTC1846 SP 1574
EOL NOISY CHANNELS

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
1549	1	1089	23	SOL Vessel 4803 meters to port of survey line, closing in
1609	56	1145	23	Streamer turn noise out of cable
1620	86	1175	23	S3G06 comm error
1717	240	1329	23	S4G07 no fire
17171	241	1330	23	S4G07 no fire
1717	242	1331	23	S4G07 no fire
1718	243	1332	23	Disabled S4G07 new volume 6120
1718	245	1334	23	Enabled S2G05 new volume 6300 in3 Timing errors
1718	246	1335	23	S2G05 timing
1719	247	1336	23	Good Shot Point no errors 6300 in3
1729	269	1357	23	S3G06 comm error
1800	361	1450	23	On the survey line ~20 meters
1845	482	1571	24	Tape change
1846	485	1574	24	Power down for a seal
1847	486-490	1575-1578	24	No fire any guns
1848	491	1579	24	40 in3 gun enabled
1901	526	1615	24	Last 40 in3 shor fired
1901	527-531	1616-1620	24	No fire any guns
1903	532	1621	24	Begin ramp up
1943	633	1722	24	Ramp up complete-First full volume shot point
2021	791	1840	24	S3G10 comm error
2044	859	1908	24	S3G10 comm error
2121	972	2021	24	S3G10 comm error
2134	965	2023	25	Tape change
2123	1010	2059	25	S3G06 comm error
2201	1084	2143	25	S3G06 comm error
2312	1281	2360	25	S3G06 comm error
2317	1295	2374	25	S3G09 comm error
2342	1376	2455	25	S1G10 delta timing error 2.7ms
2349	1395	2474	25	S1G10 delta timing error 2.5ms
0015	1466	2555	25	S3G08 comm error
0026	1500	2589	25	EOL

Observers Log

Vessel	Marcus G. Langseth
Client	USGS
Area	Bering Sea, Alaska
Job Number	MGL1111 (USGS 2)

Chief Science Officer	David Martinson		
Science Officer	Bern McKiernan		
Acquisition Leader	Mark Wooley - 12:00-24:00	Bern McKiernan 00:00-12:00	
Navigation Leader	David Ng 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	0027	028	FGSP	1053
SP #	1053	1350	LGSP	1350

Line	MGL1111_TRN05
Sequence	006
Direction	84

Streamer Parameters				
	1	2	3	4
Length (m)	8100			
Auxiliaries				
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	???			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	4950in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	16sec
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	08/14/11	08/14/11
Time UTC	0051	0238
Volume (cu in.)	4950	4950
Wind (kts)	12	11
Sea State (ft)	1m	1m
Water Depth (m)	3809	3811

Cable	EOL High Noise Channels (in u-bar)
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 1053 Strings 1,2, and 3 enabled, string 4 disabled for maintainence, tot vol=4950 in3 throughout line
EOL SP 1350
SOL NOISY CHANNELS
EOL NOISY CHANNELS

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	Marcus G. Langseth
Client	USGS
Area	Bering Sea, Alaska
Job Number	MGL1111 (USGS 2)

Chief Science Officer	David Martinson		
Science Officer	Bern McKiernan		
Acquisition Leader	Mark Wooley - 12:00-24:00	Bern McKiernan 00:00-12:00	
Navigation Leader	David Ng 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	0028	037	FGSP	843
SP #	843	5295	LGSP	5295

Line	MCS05
Sequence	007
Direction	266

Streamer Parameters				
	1	2	3	4
Length (m)	8100			
Auxiliaries				
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	???			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6320in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	16sec
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	08/14/11	08/15/11
Time UTC	03:31	04:11
Volume (cu in.)	6320in3	6320in3
Wind (kts)	4.4kt	5.1kt
Sea State (ft)	3ft	2ft
Water Depth (m)	3811	3792

Cable	EOL High Noise Channels (in u-bar)
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 843
EOL SP 5295
SOL NOISY CHANNELS
Volume is 6320 in3. Repairs to gun string 4 prevented the 360 in3 clusters to be installed. New volume for cluster is 220 in3 each Verticle
SP1718 S1G10 disabled and S1G05 enabled new volume 6280 in3

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
0331	1	843	28	SOL MGL1111_MCS05
0345	41	883	28	S3G08 comm error
0356	71	913	28	S3G08 comm error
0404	93	935	28	S2G06 comm error
0413	117	959	28	S3G06 comm error
0415	119	961	28	Power down to mit gun, whale in x-zone
0435	176	1018	28	Begin ramp up
0448	212	1054	28	S4G07 Timing error 2.6ms
0458	239	1081	28	S4G09 Delta timing error 2.6ms
0459	243	1084	28	S4G02 Delta timing error 2.9ms
0500	246	1087	28	S4G01 Delta timing error 4.8ms
0500	248	1088	28	S4G01 Delta timing error -2.8ms
0501	250	1090	28	S3G10 Delta timing error 3.1ms
0502	251	1091	28	S3G10 Delta timing error - 2.4ms
0504	256	1099	28	S2G09 Delta timing error 4.9ms
0505	257	1100	28	S2G09 Delta timing error -3.2ms
0506	259	1102	28	S1G10 Delta timing error -2.1ms
0506	206	1103	28	S1G10 Delta timing error 3.8ms
0507	262	1105	28	S1G09 Delta timing error 3.2ms
0507	263	1106	28	S1G09 Delta timing error -2.3ms
0508	265	1108	28	S3G02 Delta timing error 6.8ms
0508	266	1109	28	S3G02 Delta timing error -4.5ms
0511	274	1117	28	S2G01 Delta timing error 2.4ms
0512	277	1120	28	S1G02 Delta timing error 5.8ms
0512	278	1121	28	S1G02 Delta timing error at -3.8ms
0523	307	1150	28	S3G09 comm error
0528	320	1163	28	S3G07 comm error
0601	413	1256	28	S3G07 comm error
0601	415	1258	28	S3G06 comm error
0623	478	1320	28	S3G08 comm error
0624	482	1324	29	Tape Change
0631	504	1346	29	S3G10 comm error
0655	574	1415	29	S3G09 comm error
0707	611	1452	29	S3G06 comm error
0717	642	1483	29	S1G10 delta error 3.5ms
0717	643	1484	29	S1G10 delta error -2.3ms
0727	674	1516	29	S1G10 delta error 2.2ms
0731	685	1527	29	S1G10 delta error 2.1ms
0732	690	1532	29	S1G10 delta error -2.1ms
0823	839	1692	29	S1g10 2.1 (Note: The following 19 entries are for gun S1G10)
0824	841	1694	29	2.8
0824	842	1695	29	5.3
0824	843	1696	29	7.1
0825	844	1697	29	-3.7
0825	846	1699	29	11.3
0826	847	1700	29	10.6
0826	848	1701	29	10.0
0827	849	1702	29	6.9
0827	850	1703	29	5.9
0827	851	1704	29	8.5
0828	853	1706	29	.7
0828	854	1707	29	4.7
0828	855	1708	29	6.8
0829	856	1709	29	-11.9*

0829	857	1710	29	7.3
0829	859	1711	29	6.8
0830	860	1712	29	9.6
0830	861	1713	29	-1.2
0830	862	1714	29	4.2
0831	863	1715	29	Disabled S1G10
0831	864	1716	29	Enabled S1G05 timing errors
0831	865	1718	29	Good shot new volume 6280 in3
0858	963	1806	30	Tape Change
0932	1071	1914	30	S3G10 comm error
1013	1205	2048	30	S3G10 comm error
1034	1271	2114	30	S3G06 comm error
1047	1313	2156	30	S3G08 comm error
1109	1386	2229	30	S3G09 comm error
1118	1417	2260	30	S3G08 comm error
1127	1445	2288	31	Tape Change
1139	1485	2328	31	S3G10 comm error
1215	1600	2443	31	S3G07 comm error
1216	1603	2446	31	S3G10 comm error
1229	1644	2487	31	S1G01 -2.1 ms
1305	1757	2600	31	S1G01 -2.3 ms
1331	1777	2680	31	S1G01 -2.1 ms
1359	1927	2770	32	Tape Change
1534	2215	3058	32	S1G01 2.4 ms
1633	2387	3230	32	S1G01 2.1 ms
1640	2409	3252	33	Tape Change
1647	2428	3271	33	S1G01 -2.1 ms
1726	2428	3384	33	S3G09 comm error
1758	2683	3476	33	S1G01 -2.1 ms
1805	2633	3495	33	S1G01 -2.3 ms
1810	2652	3509	33	S1G01 2.3 ms
1822	2699	3542	33	S3G09 comm error
1847	2768	3611	33	S3G10 comm error
1905	2819	3662	33	S3G09 comm error
1912	2838	3681	33	S3G06 comm error
1914	2842	3685	33	S1G01 2.2 ms
1931	2890	3733	33	S3G07 comm error
1932	2891	3734	34	Tape Change
1946	2892	3775	34	S3G06 comm error
1949	2900	3783	34	S1G01 delta error -2.1ms
2003	2937	3820	34	S1G10 delta error -2.3ms
2105	3150	3992	34	S1G01 delta error -2.2ms
2114	3172	4014	34	S1G01 delta error 2.4ms
2130	3375	4017	35	Tape Change
2244	3421	4263	35	S3G06 comm error
2245	3424	4266	35	S3G06 comm error
2311	3500	4341	35	S1G01 delta error -2.1ms
2341	3587	4429	35	S1G01 delta error 2.2ms
0005	3662	4504	35	S1G01 delta error -2.2ms
0010	3678	4520	35	S1G01 delta error -2.1ms
0109	3856	4698	36	Tape Change
0215	4085	4918	36	S1G01 delta error -2.1ms
0256	4222	5055	36	S3G06 comm error
0259	4231	5064	36	S3G09 comm error
0306	4244	5087	36	S3G08 comm error
0334	4336	5179	36	S3G10 comm error
0334	4339	5182	37	Tape Change
0354	4404	5247	37	S3G06 comm error
0407	4442	5285	37	S3G08 comm error
0411	4452	5295	37	End of line

Observers Log

Vessel	Marcus G. Langseth
Client	USGS
Area	Bering Sea, Alaska
Job Number	MGL1111 (USGS 2)

Chief Science Officer	David Martinson		
Science Officer	Bern McKiernan		
Acquisition Leader	Mark Wooley - 12:00-24:00	Bern McKiernan 00:00-12:00	
Navigation Leader	David Ng 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	038	051	FGSP	926
SP #	926	7098	LGSP	7098

Line	MCS07
Sequence	008
Direction	39

Streamer Parameters				
	1	2	3	4
Length (m)	8100			
Auxiliaries				
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	???			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600/in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	16sec
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	08/15/11	08/16/11
Time UTC	0603	1610
Volume (cu in.)	6140	4450
Wind (kts)	8	10
Sea State (ft)	2	1
Water Depth (m)	3804	3727

Cable	EOL High Noise Channels (in u-bar)
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 926
EOL SP
SOL NOISY CHANNELS
From SOL gun S1G1 disabled, Gun S1G2 enabled. Total volume=6140 in3
SP1534 No fire on S4G02 Disabled at SP1540. Vol is 5920 in3
SP1543 Enabled S4G05 New Volume is 6100 in3 Timing errors dialed in by SP1545
SP2844 Disabled S2G01 no fire failure, Enabled S2G05 New volume 5920 in3 SP2853
EOL NOISY CHANNELS

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
0603	1	926	038	Start of line MGL1111_MCS07 Seq 8 FSP 926
0607	5	931	038	Gun string 1 going into water
0618	34	960	038	Power off string 2 to position, string 1 in water, volume=3020 in3
0621	39	965	038	String 2 enabled
0623	45	971	038	Turn complete
0625	57	983	038	Enable string 1
0626	60	986	038	Volume 5780 in3
0628	64	990	038	Disable S1G1, Enable S1G2 Volume=6140in3
0739	266	1191	038	S3G06 comm error
0803	339	1265	038	S3G09 comm error
0832	426	1357	038	S3G09 comm error
0850	483	1408	039	Tape change
0902	520	1446	039	S3G09 comm error
0931	608	1534	039	S4G02 NO FIRE
0931	609	1535	039	S4G02 NO FIRE
0932	610	1536	039	S4G02 NO FIRE
0932	611	1537	039	S4G02 NO FIRE
0932	612	1538	039	S4G02 NO FIRE
0933	613	1539	039	S4G02 NO FIRE
0934	614	1540	039	Disabled S4G02 new Volume 5920 in3
0934	617	1543	039	Enabled S4G05 New Volume 6100 in3 Timing errors 3.2 ms
0934	618	1544	039	S4G05 Timing -2.2 ms
0935	619	1545	039	Good Shot Point New Volume 6100 in3
0958	693	1619	039	Spectra missed shot
1022	767	1693	039	S3G09 comm error
1128	964	1890	040	Tape change
1132	975	1901	040	S3G06 comm error
1151	1032	1958	040	S3G06 comm error
1422	1445	2371	41	Tape change
1521	1605	2531	41	S3G08 comm error
1601	1715	2641	41	S3G09 comm error
1655	1715	2798	41	S2G01 NO FIRE
1708	1910	2836	41	S2G01 NO FIRE
1708	1912	2838	41	S2G01 NO FIRE
1709	1913	2839	41	S2G01 NO FIRE
1709	1914	2840	41	S2G01 NO FIRE
1709	1915	2841	41	S2G01 NO FIRE
1710	1916	2842	41	S2G01 NO FIRE
1710	1917	2843	41	S2G01 NO FIRE
1710	1918	2844	41	Disable S2G01
1711	1921	2847	41	Enable S2G05 timing errors
1711	1922	2848	41	S2G05 timing
1713	1926	2852	41	S2G05 timing
1714	1927	2853	42	Tape change
1715	1933	2859	42	S3G09 comm error
1726	1967	2893	42	S3G06 comm error
1727	1968	2895	42	S3G06 comm error

1732	1985	2912	42	S1G06 comm error
1830	2172	3098	42	S3G09 comm error
1842	2211	3137	42	S3G07 comm error
1910	2255	3181	42	Single trace display anomaly around file 2255
1927	2364	3290	42	S3G06 comm error
1943	2411	3335	43	Tape change
2022	2546	3473	43	S3G09 comm error
2049	2655	3582	43	S3G06 comm error
2153	2893	3817	44	Tape change
2209	2880	3827	44	S2G06 comm error
2222	2933	3868	44	S3G09 comm error
2314	3099	4034	44	S3G06 comm error
2326	3137	4072	44	S3G08 comm error
0044	3374	4305	45	Tape change
0108	3448	4379	45	S3G06 comm error
0135	3522	4453	45	S3G09 comm error
0144	3548	4477	45	S3G09 comm error
0254	2	4674	45	Power down for Dall's Dolphins Vol 40 shooting on S1G03
0258	3756	4685	45	Back to full power
0333	3857	4786	46	Tape Change
0415	3978	4917	46	S3G08 comm error
0516	4180	5109	46	S3G6 comm error
0608	4339	5259	47	Tape change
0813	4735	5663	47	S3G08 comm error
0839	4815	5741	48	Tape change
0842	4825	5751	48	S3G06 comm error
0857	4873	5799	48	S3G06 comm error
0901	4885	5811	48	S3G08 comm error
0911	4914	5840	48	S3G07 comm error
0950	5036	5962	48	S3G06 comm error
0958	5068	5994	48	S3G09 comm error
1005	5078	6004	48	S3G09 comm error
1118	5297	6223	49	Tape change
147	5384	6310	49	S3G07 comm error
1236	5529	6455	49	S3G06 comm error
1238	5535	6461	49	S3G09 comm error
1350	5779	6705	50	Tape change
1442	5916	6842	50	S3G06 comm error
1451	5941	6867	50	S3G09 comm error
1610	6172	7098	50	EOL

Observers Log

Vessel	Marcus G. Langseth
Client	USGS
Area	Bering Sea, Alaska
Job Number	MGL1111 (USGS 2)

Chief Science Officer	David Martinson		
Science Officer	Bern McKiernan		
Acquisition Leader	Mark Wooley - 12:00-24:00	Bern McKiernan 00:00-12:00	
Navigation Leader	David Ng 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	51	58	FGSP	1464
SP #	1464	4991	LGSP	4991

Line	MCS08
Sequence	009
Direction	233.5

Streamer Parameters				
	1	2	3	4
Length (m)	8100			
Auxiliaries				
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	166			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600/in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	16sec
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	08/16/11	08/17/11
Time UTC	1629	1337
Volume (cu in.)	4450	4410
Wind (kts)	10	12
Sea State (ft)	3	6
Water Depth (m)	3722	3734

Cable	EOL High Noise Channels (in u-bar)
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 1464
EOL SP 4991
SOL NOISY CHANNELS SP 1601 Strings 3 and 4 off, vol. =3300. SP 1648 String 3 on Vol=4950 SP. SP 1836 string 4 enabled, vol=6560in3
SP 2117 Gun S2G2 disabled vol= 6200 in3
SP 2120 Gun S3G05 enabled vol=6380
SP 2121 Gun S4G05 enabled vol=6560
SP 2122 Gun S4G03 disabled vol=6520
SP 2645 Gun S3G01 disabled vol=6160
SP 2646 Gun S3G03 enabled vol=6200
SP 3704 Gun S4G01 disabled, Gun S4G03 enabled vol=5880

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
1629	1	1464	51	SOL gun volume = 4450
1724	137	1601	51	String 2 deployed and on, String 3 & 4 off, gun volume = 3300
1740	184	1648	51	String 3 firing, gun volume = 4950
1856	372	1836	51	String 4 deployed and firing, gun volume = 6560
1936	483	1947	52	Tape Change
1938	550	2014	52	S3G09 comm error
1944	570	2034	52	S3G09 comm error
1948	723-753	2087-2116	52	S3G02 No fire and timing errors
2033	754	2117	52	Gun S2G02 disabled vol=6200in3
2036	757	2120	52	Gun S3G05 enabled vol=6380in3
2036	758	2121	52	Gun S4G05 enabled vol=6560 in3
2037	759	2122	52	Gun S4G03 disabled vol=6520in3
2219	965	2328	53	Tape Change
2318	1064	2600-2644	53	Various no fires and timing errors gun S3G01
2336	1182	2645	53	Gun S3G01 disabled vol=6160in3
2336	1183	2646	53	Gun S3G03 enabled vol=6200in3
0003	1267	2731	53	S3G06 comm error
0012	1289	2753	53	S3G02 DE error -2.2
0110	1447	2911	54	Tape Change
0146	1552	3016	54	S3G10 comm error
0152	1568	3032	54	S3G02 DE error 2.3ms
0214	1630	3093	54	S3G02 DE error 2.1 ms
0218	1643	3106	54	S3G02 DE error 2.3 ms
0238	1698	3162	54	S3G02 DE error 2.3ms
0308	1782	3246	54	S3G02 DE error 2.3ms
0308	1783	3247	54	S3G02 DE error 2.3ms
0312	1795	3259	54	S3G02 DE error 2.9ms
0334	1857	3321	54	S3G02 DE error 2.1ms
0402	1929	3393	55	Tape Change
0443	2049	3513	55	S3G02 DE error 2.6ms
0514	2136	3600	55	S3G09 DE error 2.8ms
0515	2140	3604	55	S3G10 comm error
0548	2219	3683-3703	55	No fires gun S4G01
0554	2240	3704	55	Disable gun S4G01 Enable gun S4G03 Vol=5880in3
0629	2341	3805	55	S3G02 DE error 2.6ms
0656	2411	3874	56	Tape Change
0703	2435	3898	56	S3G09 comm error
0732	2514	3978	56	S3G09 DE 3.6ms
0732	2515	3979	56	S3G09 DE -2.7ms
0804	2601	4065	56	S3G09 comm error
0815	2632	4096	56	S3G02 2.1 ms
0816	2633	4097	56	S3G02 -2.3 ms
0846	2716	4180	56	S3G02 2.9 ms
0849	2723	4187	56	S3G02 -2.1 ms
0902	2759	4222	56	S3G010 comm error
0905	2766	4229	56	S3G02 3.0 ms
0950	2892	4355	57	Tape Change

1012	2953	4416	57	S3G02 2.3 ms
1029	3002	4465	57	S3G02 2.1 ms
1033	3012	4475	57	S3G09 comm error
1034	3016	4479	57	S3G02 2.9 ms
1114	3130	4593	57	S3G02 3.0 ms
1115	3131	4594	57	S3G02 -2.6 ms
1127	3167	4630	57	S3G08 comm error
1134	3186	4649	57	S3G02 3.0 ms
1141	3205	4668	57	S3G09 comm error
1157	3311	4774	57	S3G02 -2.3 ms
1203	3269	4732	57	S3G02 2.9 ms
1207	3279	4742	57	S3G02 2.3 ms
1215	3304	4767	57	S2G09 2.5 ms
1228	3340	4803	57	S3G02 2.0 ms
1240	3374	4837	58	Tape Change
1245	3387	4850	58	S3G02 3.3 ms
1245	3388	4851	58	S3G02 -2.1 ms
1249	3397	4862	58	S3G02 3.0 ms
1255	3415	4878	58	S3G02 3.1 ms
1255	3416	4879	58	S3G02 -2.3 ms
1337	3529	4991	58	end of line

Observers Log

Vessel	Marcus G. Langseth
Client	USGS
Area	Bering Sea, Alaska
Job Number	MGL1111 (USGS 2)

Chief Science Officer	David Martinson		
Science Officer	Bern McKiernan		
Acquisition Leader	Mark Wooley - 12:00-24:00	Bern McKiernan 00:00-12:00	
Navigation Leader	David Ng 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	59	65	FGSP	1036
SP #	1036	3965	LGSP	3965

Line	MCS09
Sequence	010
Direction	120

Streamer Parameters				
	1	2	3	4
Length (m)	8100			
Auxiliaries				
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	???			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600/in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	16sec
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	8/17/11	8/18/11
Time UTC	1340	0700
Volume (cu in.)	4410	5880
Wind (kts)	24	0
Sea State (ft)	9-12	2-4
Water Depth (m)	3729	3808

Cable	EOL High Noise Channels (in u-bar)
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 1036
EOL SP 3965
SP 1275 through 1292 missed sps d/t restart of NCC
Gun maintenance at strt of line. Full volume of 4 gun strings complete by SP1703 6240 in3
SP1760 reduced 37 gun array to 36 gun allowed array new volume 6200 in3
SP 2044 gun disable S4G02 d/t misfires and no fires vol=5840in3
SP 2045 gun S4G04 enabled vol=5880in3
EOL gun volume=5880 in3

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	Marcus G. Langseth
Client	USGS
Area	Bering Sea, Alaska
Job Number	MGL1111 (USGS 2)

Chief Science Officer	David Martinson		
Science Officer	Bern McKiernan		
Acquisition Leader	Mark Wooley - 12:00-24:00	Bern McKiernan 00:00-12:00	
Navigation Leader	David Ng 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	067	069	FGSP	1013
SP #	1012	2617	LGSP	2617

Line	MCS09A
Sequence	011
Direction	123

Streamer Parameters				
	1	2	3	4
Length (m)	8100			
Auxiliaries				
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	???			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600/in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	16sec
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	08/18/11	08/18/11
Time UTC	0704	1626
Volume (cu in.)	5880	5880
Wind (kts)	0	13
Sea State (ft)	1-2m	1-3ft
Water Depth (m)	3805.5m	3816

Cable	EOL High Noise Channels (in u-bar)
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 SP1013
EOL SP2617
SOL NOISY CHANNELS
S1G01, S2G01 S3G01 cluster bar removed and a single 360 in3 gun used. S4G01 (cluster intact) secured on previous line due to no fire error.
EOL NOISY CHANNELS

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
0704	1	1012	066	SOL MCS09A timing error S1G02 SOL volume=5880
0704	2	1013	066	First good shot point of line
0812	196	1207	066	S3G07 comm error
0941	453	1465	066	S3G10 comm error
0951	483	1494	067	Tape change
1113	719	1730	067	S3G07 comm error
1207	873	1884	067	S3G10 comm error
1240	965	1976	068	Tape change
1245	978	1989	068	S3G06 comm error
1323	1084	2095	068	S3G06 comm error
1326	1094	2105	068	S3G07 comm error
1529	1447	2458	069	Tape change
1539	1487	2488	069	S3G06 comm error
1553	1516	2527	069	S3G06 comm error
1606	1555	2566	069	S3G06 comm error
1609	1565	2576	069	Start of turn noise evident on cable
1626	1606	2617	069	EOL

Observers Log

Vessel	Marcus G. Langseth
Client	USGS
Area	Bering Sea, Alaska
Job Number	MGL1111 (USGS 2)

Chief Science Officer	David Martinson		
Science Officer	Bern McKiernan		
Acquisition Leader	Mark Wooley - 12:00-24:00	Bern McKiernan 00:00-12:00	
Navigation Leader	David Ng 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	70	73	FGSP	905
SP #	905	2379	LGSP	2379

Line	MCS10
Sequence	012
Direction	304.3

Streamer Parameters				
	1	2	3	4
Length (m)	8100			
Auxiliaries				
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	???			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600/in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	16sec
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	905	2379
Date MM/DD/YY	08/18/11	08/19/11
Time UTC	1651	0159
Volume (cu in.)	5880	5880
Wind (kts)	20	17
Sea State (ft)	1-3	2-3
Water Depth (m)	3811.4	3810.6

Cable	EOL High Noise Channels (in u-bar)
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 SP905 Turn noise evident at start of line.
EOL SP 2379
SOL NOISY CHANNELS
S1G01, S2G01 S3G01 cluster bar removed and a single 360 in3 gun used. S4G01 (cluster intact) secured on previous line due to no fire error.
All spares used volume is 5880 in3
Power down SP1107, Ramp up begins SP1161. Ramp up ends SP1268
Firrst full power shot=1268
EOL NOISY CHANNELS

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
1651	1	905	070	SOL MCS 10 Turn Noise at head.
1659	13	917	070	Turn noise moved to middle
rn	71	976	070	S3G09 comm error
1739	72	977	070	S3G06 comm error
1750	92	996	070	turn noise evident
1832	203	1107	070	Power down porpoise last good shot
1832	204	1108	070	No fire array
1833	205	1109	070	S1G03 enabled 40 in3 volume
1852	244	1158	070	Last 40 in3 shot SP1159-1160 no fire
1853	247	1161	070	ramp up
1931	364	1268	070	Full volume 5880 in3 ramp up complete
1945	403	1307	070	S3G06 comm error
2010	477	1381	070	S3G09 comm error
2015	483	1387	071	Tape Change
2158	791	1696	071	S03G07 comm error
2207	819	1724	071	S03G9 comm error
2242	919	1824	071	S3G8 comm error
2301	967	1872	072	Tape Change
2354	1123	2028	072	S3G9 comm error
2359	1138	2043	072	LSP of 8/18/2011
0030	1223	2128	072	S3G2 timing error
0055	1295	2200	072	S3G7 comm error
0149	1446	2351	073	Tape Change
0159	1474	2379	073	End of line MCS10 Seq 12

Observers Log

Vessel	Marcus G. Langseth
Client	USGS
Area	Bering Sea, Alaska
Job Number	MGL1111 (USGS 2)

Chief Science Officer	David Martinson		
Science Officer	Bern McKiernan		
Acquisition Leader	Mark Wooley - 12:00-24:00	Bern McKiernan 00:00-12:00	
Navigation Leader	David Ng 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	0075	76	FGSP	997
SP #	996	1809	LGSP	1809

Line	TRN11
Sequence	013
Direction	108

Streamer Parameters				
	1	2	3	4
Length (m)	8100			
Auxiliaries				
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	???			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600/in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	16sec
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	996	1809
Date MM/DD/YY	08/19/11	08/20/11
Time UTC	0230	0735
Volume (cu in.)	5880	5880
Wind (kts)	17kts	11kt
Sea State (ft)	1-2m	1-2m
Water Depth (m)	3810	3805

Cable	EOL High Noise Channels (in u-bar)
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 996
EOL SP 1809
SOL NOISY CHANNELS
Tape 74 does not exist
Streamer in sharp turn @ SOL, 80-100 microbar noise on front half of streamer, movig slowly down streamer.
EOL SP 1809, gun volume 5880in3
Streamer in turn at EOL
EOL NOISY CHANNELS

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	Marcus G. Langseth
Client	USGS
Area	Bering Sea, Alaska
Job Number	MGL1111 (USGS 2)

Chief Science Officer	David Martinson		
Science Officer	Bern McKiernan		
Acquisition Leader	Mark Wooley - 12:00-24:00	Bern McKiernan 00:00-12:00	
Navigation Leader	David Ng 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	077	082	FGSP	921
SP #	920	3626	LGSP	3626

Line	MCS011
Sequence	014
Direction	266.5

Streamer Parameters				
	1	2	3	4
Length (m)	8100			
Auxiliaries				
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	???			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600/in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	16sec
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	08/19/11	08/19/11
Time UTC	0758	2345
Volume (cu in.)	5880in3	5880in3
Wind (kts)	20kts	7kts
Sea State (m)	2-3m	2-3m
Water Depth (m)	3810.7m	3821m

Cable	EOL High Noise Channels (in u-bar)
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 920 timing error First good SP=921
Streamer in turn @SOL Gun volume @ SOL =5880in3
SOL NOISY CHANNELS
S1G01, S2G01 S3G01 cluster bar removed and a single 360 in3 gun used. S4G01 (cluster intact) secured on previous line due to no fire error.
SP2250 Streamer deployed to 12 meters to reduce chance of surface lifting from sea state.
SP 3557 Birds coming to 9m in anticipation of turn
SP 3626 EOL , streamer in turn @ EOL

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
0758	1	920	077	SOL MGLMCS11 Seq 14 Bad shot timing error S1G2, in turn @ SOL, Vol=5880in3
0758	2	921	077	FGSP of line
0821	63	982	077	S3G06 comm error
0828	85	1004	077	S3G09 comm error
0837	114	1033	077	S3G09 comm error
0912	213	1132	077	Changed bird depth to 10 meters due to sea swell uplifting streamer
1045	483	1402	078	Tape change
1134	622	1541	078	S3G07 comm error
1208	721	1640	078	S3G06 comm error
1215	740	1659	078	S3G06 comm error
1215	741	1660	078	S3G07 comm error
1218	748	1667	078	S3G10 comm error
1239	807	1726	078	S3G06 comm error
1247	830	1749	078	S3G07 comm error
1335	965	1884	079	Tape change
1425	1104	2023	079	S3G06 comm error
1519	1228	2177	079	Streamer center uplifting to surface due to sea state.
1520	1259	2178	079	Moved Streamer to 11 meter depth
1525	1277	2194	079	Streamer uplifting continuing
1528	1283	2202	079	Set streamer to 14 meter
1549	1331	2250	079	Streamer moved to 12 meters and stable noise reduced
1624	1447	2366	080	Tape change
1425	1488	2408	080	S3G07 comm error
1700	1559	2471	080	S3G08 comm error
1716	1598	2518	080	S3G08 comm error
1723	1618	2537	080	S3G09 comm error
1729	1636	2555	080	S3G09 comm error
1751	1700	2619	080	Last full volume sp - power down for Porpoise
1754	1710	2629	080	Lost sight of mammal, 15 minute reduced volume prior to ramp up
1810	1750-1751	2669-2670	080	no fire
1810	1752	2671	080	Begin ramp up
1847	1857	2776	080	Full volume S1G02 7.2 ms delta
1847	1858	2777	080	S1G02 -5.4 ms
1848	1859	2778	080	good shot full volume 5880 in3
1848	1860	2779	080	Noticable noise on streamer channels 361 and channel 515
1854	1878	2797	080	S3G06 comm error
1956	2044	2964	081	Tape Change
2039	2177	3095	081	S3G7 comm error
2146	2360	3285	081	S3G6 comm error
2204	2411	3331	082	Tape change
2324	2437	3557	082	Birds back to 9m in anticipation of turn
2345	2506	3626	082	End of line MGL MCS11
				Streamer in turn at Eol

Observers Log

Vessel	Marcus G. Langseth
Client	USGS
Area	Bering Sea, Alaska
Job Number	MGL1111 (USGS 2)

Chief Science Officer	David Martinson		
Science Officer	Bern McKiernan		
Acquisition Leader	Mark Wooley - 12:00-24:00	Bern McKiernan 00:00-12:00	
Navigation Leader	David Ng 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	083	083	FGSP	1011
SP #	1011	1377	LGSP	1377

Line	TRN12
Sequence	015
Direction	96.8

Streamer Parameters				
	1	2	3	4
Length (m)	8100			
Auxiliaries				
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	???			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600/in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	16sec
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
Date MM/DD/YY	08/20/11	08/20/11
Time UTC	0031	0245
Volume (cu in.)	5880in3	5880in3
Wind (kts)	8kt	15kt
Sea State (m)	2-3m	2-3m
Water Depth (m)	3825.6m	3823.5m

Cable	EOL High Noise Channels (in u-bar)
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 1011
EOL SP 1377
Streamer in turn @ SOL, 60-80 microbars moving down streamer as turn progresses
Begin turning to line @ SP 1343
Turning at EOL, Streamer in bend
S1G01, S2G01 S3G01 cluster bar removed and a single 360 in3 gun used. S4G01 (cluster intact) secured on previous line due to no fire error
EOL NOISY CHANNELS

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFFSP - 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
0031	1	1011	083	SOL MGLTRN12 Seq 15 Streamer in turn @sol
0037	14	1025	083	S3G2 Timing error
0046	39	1050	083	Vessel on line heading, streamer still in bend
0122	139	1150	083	Streamer straight
0228	334	1343	083	Begin port turn to line MGL MCS12
0230	339	1348	083	S3G2 Timing error
0228	368	1343	083	Begin port turn to line MGL MCS12
0241	402	1377	083	End of line, turning to line MGL MCS12 @ EOL

Observers Log

Vessel	Marcus G. Langseth
Client	USGS
Area	Bering Sea, Alaska
Job Number	MGL1111 (USGS 2)

Chief Science Officer	David Martinson		
Science Officer	Bern McKiernan		
Acquisition Leader	Mark Wooley - 12:00-24:00	Bern McKiernan 00:00-12:00	
Navigation Leader	David Ng 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	084	088	FGSP	971
SP #	971	3313	LGSP	3313

Line	MCS12
Sequence	016
Direction	43.4

Streamer Parameters				
	1	2	3	4
Length (m)	8100			
Auxiliaries				
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	???			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600/in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	16sec
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
Date MM/DD/YY	08/20/11	08/20/11
Time UTC	0245	1626
Volume (cu in.)	5880in3	5880in3
Wind (kts)	16.6	3
Sea State (m)	1-2m	1-2m
Water Depth (m)	3824.4m	3790m

Cable	EOL High Noise Channels (in u-bar)
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 971
EOL SP3313
Streamer in bend @ SOL
S1G01, S2G01 S3G01 cluster bar removed and a single 360 in3 gun used. S4G01 (cluster intact) secured on previous line due to no fire error
EOL NOISY CHANNELS

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	Marcus G. Langseth
Client	USGS
Area	Bering Sea, Alaska
Job Number	MGL1111 (USGS 2)

Chief Science Officer	David Martinson		
Science Officer	Bern McKiernan		
Acquisition Leader	Mark Wooley - 12:00-24:00	Bern McKiernan 00:00-12:00	
Navigation Leader	David Ng 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	89	92	FGSP	1089
SP #	1089	2985	LGSP	2985

Line	MCS13
Sequence	017
Direction	183.1

Streamer Parameters				
	1	2	3	4
Length (m)	8100			
Auxiliaries				
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	???			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600/in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	16sec
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
Date MM/DD/YY	08/20/11	08/21/11
Time UTC	1628	0323
Volume (cu in.)	5880in3	5880in3
Wind (kts)	3	11
Sea State (m)	1-2m	1-2mm
Water Depth (m)	3794m	3814mm

Cable	EOL High Noise Channels (in u-bar)
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 SP1089
EOL SP=2985
SOL NOISY CHANNELS, 236, 265, 276, 361, 391, 604
S1G01, S2G01 S3G01 cluster bar removed and a single 360 in3 gun used. S4G01 (cluster intact) secured on previous line due to no fire error
Turn noise evident in record
SP1099 Power down for whale, lost sight 30 minute clearance wait. ETA 1703 GMT
LSP= 2985
EOL NOISY CHANNELS 236, 265, 276, 361, 391, 604

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
1628	1	1089	089	SOL MGL1111 MCS13 Seq 017
1633	9	1098	089	last full volume
1634	10	1099	089	no fire
1634	11	1100	089	mitigation gun lost sight of animal 30 minute visual power down.
1704	88-89	1175-1176	089	no fire
1705	90	1178	089	start ramp up
1719-1721	130-137	1218-1225	089	Spectra locked up no triggers issued.
1748	206	1294	089	Ramp up complete First shot of full volume 5880 in3
1836	335	1423	089	S3G06 comm error
1840	346	1434	089	S3G06 comm error
1852	377	1465	089	S3G07 comm error
1931	483	1571	090	Tape change
2002	567	1655	090	S3G06 comm error
2051	696	1792	090	S3G6 comm error
2052	699	1795	090	S3G10 comm error
2224	965	1959	090	Tape Change
2234	1006	2100	091	S3G10 comm error
0040	1396	2485	091	S3G10 comm error
0053	1446	2525	092	Tape Change
0114	1492	2588	092	S3G06 comm error
0126	1533	2626	092	S3G06 comm error
0203	1646	2742	092	S3G09 Comm error
0230	1729	2825	092	S3G09 Comm error
0323	1789	2985	092	End of line MGL1111 MCS13

Observers Log

Vessel	Marcus G. Langseth
Client	USGS
Area	Bering Sea, Alaska
Job Number	MGL1111 (USGS 2)

Chief Science Officer	David Martinson		
Science Officer	Bern McKiernan		
Acquisition Leader	Mark Wooley - 12:00-24:00	Bern McKiernan 00:00-12:00	
Navigation Leader	David Ng 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	N/A	N/A	FGSP	985
SP #	985	1706	LGSP	1706

Line	OBS01
Sequence	018
Direction	39.6

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

Source Parameters	
Total Volume	6600/in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	
Total recording delay	
Sample Rate	
Polarity	
Low-Cut	
Hi-Cut	
Tape Format	

Description	SOL/FQCSP	EOL/LQCSP
Date MM/DD/YY	08/23/2011	08/23/11
Time UTC	0208	1536
Volume (cu in.)	5130in3	1830in3in3
Wind (kts)	20	42
Sea State (m)	2-3m	3-4mm
Water Depth (m)	3812.1m	3795m

Cable	EOL High Noise Channels (in u-bar)
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 985 Gun string #1 offline d/t no comms, gun S2G01 disabled d/t misfires, total volume @ SOL=5130in3
String 1 comms functioning @ sp 1106. Guns were singly enabled and 05 guns disabled in an order that there were never more than 36 guns firing at any time. (Ref to obslog for details) New volume=6420in3 First sp with new volume=1129
EOL Line truncated d/t weather LGSP=1706 Gun vol @EOL=1830in3

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	SP	Description
0208	985	First Shot point of line MGL OBS01 Gun Volume=5130in3 (Gun string 1 offline d/t bad comms)
0422	1106	String 1 comms appears to be functional, will enable guns string 1 S1G01 enabled vol=5490in3
0422	1106	S1G01 timing error 3.0ms
0427	1107	S1G01 timing error 3.8ms
0427	1111	Enabled S1G02 vol=5850
0437	1112	S1G01 timing error -2.4ms
0429	1113	Enabled S1G03 vol=5890
0431	1114	Enabled S1G04 vol=6070 Timing error 3.7ms
0432	1115	S1G04 timing error -2.4ms
0434	1117	S2G05 disabled for spare, S1G06 enabled Vol=5980 S1G06 timing error
0436	1119	S3G05 disabled for spare, S1G07 enabled vol=5920 S1G07 timing error 3.8ms
0437	1120	S1G07 timing error -2.4ms
0439	1122	S1G08 enabled vol=5980
0440	1123	S4G05 disabled for spare, S1G09 enabled, vol=6020 S1G09 timing error 6ms
0442	1124	S1G09 timing error -4.3ms
0444	1126	S1G10 enabled vol=6240 S1G10 timing error 5.7ms
0445	1127	Enabled S2G05 S1G10 timing error -2.8ms, S2G05 timing error 3.3ms
0446	1128	S3G06 comm error
0448	1129	First good shot with new array, volume=6420 in3
0448	1130	S3G09 comm error
0606	1201	S1G02 No fire
0607	1202	S1G02 No fire
0609	1204	S1G02 Timing error -4.7ms
0613	1207	S1G02Timing error 5.6ms
0614	1208	S1G02 Timing error -9.6ms
0615	1209	S1G02 timing error -2.3ms
0618	1212	S1G02 No fire
0619	1213	S1G02 timing error
0621	1215	S1G02 No fire
0622	1216	S1G02 No fire--disabled d/t numerous no fires and timing errors, new volume=6060in3
0628	1220	S1G05 enabled New volume =6240in3 S1G05 timing error 4.7ms
0629	1221	S1G05 timing error -2.7ms
0648	1239	S3G06 comm error
0722	1270	S3G08 comm error
0730	1277	S1G01 comm error
0809	1313	S1G01 comm error
0824	1326	S1G01 comm error
0830	1332	S4G03 disabled S4G05 enabled
0831	1333	S1G03 disabled S1G05 enabled
0832	1334	New volume 6520 in3
0848	1350	S1G01-S1g10 comm error entire string no fire comm error indication
0923	1380	S1G05, S1G06 comm error
0946	1401	S1G06 comm error
1145	1509	S1G01-S1g10 comm error entire string no fire comm error indication
1226	1546	S1G01-S1g10 comm error entire string no fire comm error indication
1242	1561	S1G01-S1g10 comm error entire string no fire comm error indication
1245	1564	S2G09 2.2 ms timing error
1334	1608	S2G09 2.2 ms timing error
1338	1609	S1G01-S1g10 comm error entire string no fire comm error indication
1426	1655	S1G01-S1g10 comm error entire string no fire comm error indication
1431	1659	S1G01-S1g10 comm error entire string no fire comm error indication
1432	1660	S1G01-S1g10 comm error entire string no fire comm error indication
1435	1662	S1G01-S1g10 comm error entire string no fire comm error indication
1436	1663	S1G01-S1g10 comm error entire string no fire comm error indication
1437	1664	S1G01-S1g10 comm error entire string no fire comm error indication
1444	1665	S1G01-S1g10 comm error entire string no fire comm error indication
1445	1671	S1G01-S1g10 comm error entire string no fire comm error indication
1536	1706	Line truncated d/t weather, wind 42 kts steady LGSP

Observers Log

Vessel	Marcus G. Langseth
Client	USGS
Area	Bering Sea, Alaska
Job Number	MGL1111 (USGS 2)

Chief Science Officer	David Martinson		
Science Officer	Bern McKiernan		
Acquisition Leader	Mark Wooley - 12:00-24:00	Bern McKiernan 00:00-12:00	
Navigation Leader	David Ng 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	N/A	N/A	FGSP	1655
SP #	1655	2490	LGSP	2490

Line	OBS01B
Sequence	019
Direction	39.6

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

Source Parameters	
Total Volume	6600/in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	
Total recording delay	
Sample Rate	
Polarity	
Low-Cut	
Hi-Cut	
Tape Format	

Description	SOL/FQCSP	EOL/LQCSP
Date MM/DD/YY	08/24/11	08/24/11
Time UTC	0727	2251
Volume (cu in.)	4950in3	6520in3
Wind (kts)	14.5	17.5
Sea State (m)	2-3m	1-2m
Water Depth (m)	3784.6m	3763.7m

Cable	EOL High Noise Channels (in u-bar)
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 SP1655
EOL SP 2490
String 1 intermittent, mostly good throughout line.

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	SP	Description
0727	1655	SOL OBS01B SEQ 018 Gun string 1 continues errors from last line
0837	1707	Errors subsided by moving tow rope on winch in. Gun string one is now towed closer and hangs the umbilical down
0838	1708	String 1 comm error
0842	1711	S2G01 2.7 ms
0844	1713	String 1 comm error
0850	1718	S1G08 comm error
0857	1725	S2G01 no fire
0857	1725	S1G3,4,5,6,7,8,9 no fire
0858	1726	S2G01 no fire
0904	1731	S1G4,6,8 no fire
0914	1740	S1 G1,2,3,4,6,7,8 no fire
0924	1749	String one comm error
0925	1750	String one comm error
0925	1750	S3G06 comm error
0929	1754	S3G06 comm error
0937	1762	String one comm error
0941	1766	S1G06 comm error
0943	1768	String one comm error
0948	1773	String one comm error
0952	1777	String one comm error
1006	1789	S1G09 comm error
1024	1806	S1G03 G06 comm error
1040	1821	String one comm error
1045	1826	S3G07 comm error
1246	1939	String one comm error
1251	1943	S1G06,09 comm error
1252	1944	S1G09 comm error
1319	1969	S2G01 -10.3 ms
1327	1977	S2G01 1.4 ms
1329	1979	S2G01 11.3 ms
1337	1986	S2G01 noise on signal unable to fire correctly disabled S1G01 enabled S2G05
1338	1987	Delta timing S2G05 -5.3
1339	1988	Disabled S3G03 Enabled S3G05 new volume 6560in3
1340	1989	Good shot new volume 6560 in3
1421	2027	S1G03,6,8,9 comm error
1455	2058	S1G06 comm error
1529	2089	S1G03, 5,6,9 comm error
1613	2129	S1G05,6 comm error
1619	2135	S1G03,6,7,9 comm error
1621	2137	String 1 comm error
1625	2140	S1G09 comm error
1626	2141	S1G03 com
1627	2142	String one comm error
1639	2153	String one comm error
1641	2155	String one comm error
1649	2162	S1G09 comm error
1711	2183	S1G06 comm error

1718	2189	String one comm error
1719	2190	String one comm error
1720	2191	S1G01 no fire
1722	2193	String one comm error
1725	2195	String no fire/comm error
1730	2200	String one comm error
1731	2201	String one comm error
1732	2202	String one comm error
1736	2206	S1G02,4,6 comm error
1741	2210	String one comm error
1742	2211	String one comm error
1745	2214	String one comm error
1759	2227	String one comm error
1800	2228	String one comm error/S3G08 comm error
1801	2229	String one comm error
1802	2230	S1G03,5,6,7,8,9,10 comm error
1810	2237	S1G06,9,10 comm error
1841	2241	String one comm error
1823	2249	String one comm error
1828	2253	S1G06,09 com
1835	2260	S1G03,06,09 comm error
1857	2280	S1G06 comm error
1904	2286	S1G03 comm error
1905	2290	String one comm error
1915	2296	S1G03, 6,9,10 comm error
1916	2297	S1G6,9,10 comm error
1922	2302	S1G01 comm error
1927	2307	S1G05,6,7,8,9,10 comm error
1932	2311	S1G09,10 comm error
1933	2312	String one comm error
1934	2313	String one comm error
1941	2319	String one comm error
1942	2320	String one comm error
1947	2325	S1G03 comm error
1956	2333	String one comm error
2008	2343	S1G06 comm error
2016	2354	S1G10 comm error
2047	2376	S3G09 comm error
2053	2382	S1G10 comm error
2134	2418	S1G08, 09 comm error
2201	2443	S1 comm error
2205	2447	S1 comm error
2237	2476	S4,5,6 Comm error
2238	2477	S4, 5, 6 comm error
2251	2490	Last SP of line

Observers Log

Vessel	Marcus G. Langseth
Client	USGS
Area	Bering Sea, Alaska
Job Number	MGL1111 (USGS 2)

Chief Science Officer	David Martinson		
Science Officer	Bern McKiernan		
Acquisition Leader	Mark Wooley - 12:00-24:00	Bern McKiernan 00:00-12:00	
Navigation Leader	David Ng 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	N/A	N/A	FGSP	975
SP #	962	1524	LGSP	1524

Line	OBS02A
Sequence	020
Direction	260

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

Source Parameters	
Total Volume	6600/in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	
Total recording delay	
Sample Rate	
Polarity	
Low-Cut	
Hi-Cut	
Tape Format	

Description	SOL/FQCSP	EOL/LQCSP
Date MM/DD/YY	08/25/11	08/25/11
Time UTC	0014	1112
Volume (cu in.)	6340in3	4420in3
Wind (kts)	16.6kts	21
Sea State (m)	1-2m	1m
Water Depth (m)	3762.5m	3472m

Cable	EOL High Noise Channels (in u-bar)
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 962 Comms 1 and 2 intermittent
FGSP 975 vol=6340in3
At SOL Gun String four was reduced by guns S4G07, S4G08,S4G09,S4G10 Due to gun module comms failure VOL=6340 in3
SP1003 Disabled S4G06 new Vol 6250 in3
SP1429 Secured gun string 1 due to turn causing flat line failures of module comms on entire string new volume 4420 in3 until EOL
EOL SP1524

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	SP	Description
0014	962	SOL Line OBS02A String 1 &2 comms intermittent
0030	975	First good shot point, volume =6340in3
0042	985	S4G06 No fire
0043	986	S4G06 comm error
0045	988	S4G06 comm error
0046	990	S4G06 No fire
0048	991	S4G06 No fire
0050	992	S4G06 no fire
0054	995	S4G06 comm error
0056	998	S4G06 no fire
0059	1001	S4G06 no fire
0101	1003	S4G06 disabled vol=6250in3
0115	1015	S1G09 comm error
0148	1044	S1 comm error
0149	1045	S1G03 comm error
0156	1051	S1 comm error
0200	1054	S1 comm error
0203	1056	S1G10 comm error
0204	1058	S1G09 comm error
0211	1063	S1 comm error
0217	1068	S1G4-10 comm error
0219	1070	S1G06 comm error
0223	1073	S1 comm error
0228	1077	S1G09 comm error
0239	1087	S1G4-10 comm error
0248	1093	S1G10 comm error
0248	1094	S1G10 comm error
0256	1101	S1 comm error
0257	1102	S1 comm error
0259	1104	S1G4-10 comm error
0303	1107	S1 comm error
0310	1113	S1 comm error
0321	1122	S1G06 comm error
0324	1125	S1G06 comm error
0337	1131	S1G6-10 comm error
0338	1136	S1G4 comm error
0350	1141-1152	S1G8,9,10 no comms
0357	1153	S1G8,9,10 disabled vol=5750
0407	1157	S1G8,9,10 enabled vol=6250
0414	1166	S1G4-10 comm error
0424	1175	S1 comm error
0431	1181	S1G03 comm error
0444	1192	S1 comm error
0450	1198	S1 G3, 6, 9 comm error
0500	1206	S1G09 comm error
0506	1212	S1 comm error
0512	1213	S1G06 comm error

0512	1217	S1G06, 08,09, 10 comm error
0518	1222	S1G09 comm error
0538	1240	S1G10 comm error
0543	1245	S3G06 comm error
0616	1275	S1G08 comm error
0618	1277	S1G08, 09 comm error
0626	1284	S1G03 comm error
0637	1294	S1 comm error
0647	1303	S1 G8, 9, 10 comm error
0705	1319	S1 G8, 9, 10 comm error
0711	1324	S1 comm error
0717	1330	S3G06 comm error
0805	1372	S1G04,5,6 comm error
0807	1374	S1G08,9,10 comm error
0815	1381	S1G04,5,6,7,8,9,10 comm error
0818	1384	S1G6,7,8,9,10 comm error
0824	1389	S1G07,8 comm error
0835	1400	S1G6,7,8,9,10 comm error
0839	1403	S1G4,5,6 comm error
0841	1405	S1G04 comm error
0842	1406	S1G8,9,10 comm error
0843	1407	S1G4,5 comm error
0847	1410	S1G4,5,6,7,8,9,10 comm error
0851	1414	S1g05 comm error
0855	1417	S1G3,6 comm error
0856	1418	S1G8,9 comm error
0900	1422	S1g8 comm error
0904	1426	S1G7,8,9, comm error
0918	1439	S1G4,5 comm error
0921	1441	S1 g8,9,10 comm error
0923	1443	S1g8 comm error
0929	1448	S1 4,5,8 comm error
0931	1450	S1G03 comm error
0933	1452	String one comm error 1-10
0937	1456	S1G04 comm error
0941	1459	S1g05 comm error
0947	1465	s1g03,6 comm error
0956	1473	String one comm error 1-10
0957	1474	String one comm error 1-10
0958	1475	String one comm error 1-10
0959	1476	String one comm error 1-10
1000	1477	String one comm error 1-10
1002	1478	String one comm error 1-10
1003	1479	Power secured on Gun string one while in turn off line to next line new volume 4420 in3
1004	1480	S4G08 comm error
1030	1494	S3G06 comm error
1112	1524	EOL OBS02A Seq 020 Vol 4420 in3

Observers Log

Vessel	Marcus G. Langseth
Client	USGS
Area	Bering Sea, Alaska
Job Number	MGL1111 (USGS 2)

Chief Science Officer	David Martinson		
Science Officer	Bern McKiernan		
Acquisition Leader	Mark Wooley - 12:00-24:00	Bern McKiernan 00:00-12:00	
Navigation Leader	David Ng 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	N/A	N/A	FGSP	978
SP #	978	2497	LGSP	2497

Line	OBS02
Sequence	021
Direction	121.1

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

Source Parameters	
Total Volume	6600/in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	
Total recording delay	
Sample Rate	
Polarity	
Low-Cut	
Hi-Cut	
Tape Format	

Description	SOL/FQCSP	EOL/LQCSP
Date MM/DD/YY	08/25/11	8/26/11
Time UTC	1118	1559
Volume (cu in.)	6250in3	5890in3
Wind (kts)	21	12
Sea State (m)	1m	1m
Water Depth (m)	3709m	3816m

Cable	EOL High Noise Channels (in u-bar)
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 SP978
EOL SP
SOL Gun String four was reduced by guns S4G06 S4G07 S4G08,S4G09,S4G10 gun module comms failure VOL=6250 in3 from Previous line
SOL S2G01 disabled due to module comm errors from previous line
Power down SP 1401 Full source SP1409
Sp 1480 S4G01 disabled for no fires Volume=5890in3
EOL SP2497

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
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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	SP	Description
1118	978	SOL MGL1111 OBS02 Seq 021 Volume 6250in3
1131	988	S1G04,05 comm error
1153	1007	S1G07 comm error
1242	1050	S1G09 comm error
1248	1055	S3G06 comm error
1258	1064	String one comm error S1G03,04,05,06,07,08,09,10
1313	1078	S1G06 comm error
1354	1114	S1G03 comm error
1406	1125	S1G09 comm error
1415	1133	String one comm error S1G03,04,05,06,07,08,09,10
1433	1149	S1G09,10 comm error
1444	1150	S1G06 comm error
1445	1159	S1g09, S3G09 comm error
1446	1160	S1 go4,5,6,7,8,9,10 comm error
1447	1161	S3G06 comm error
1500	1173	S1G08 comm error
1533	1202	S1G03 comm error
1535	1204	String one comm error S1G03,04,05,06,07,08,09,10
1539	1208	S1G09,10 comm error
1542	1210	S1G04,5,6,7,8,9,10 comm error
1543	1211	S1G05,6 comm error
1549	1216	S1G06 comm error
1555	1222	S1G08 comm error
1556	1223	S1G08 comm error
1621	1244	S1G03 comm error
1640	1260	S1G03 comm error
1652	1270	S1G07 comm error
1656	1274	S3G06 comm error
1713	1289	S1G04, 5 comm error
1720	1295	S1G06,8,9 comm error
1722	1297	S3G01 comm error
1724	1299	S3G02 -2.6 ms
1736	1309	S1G10 comm error
1741	1314	S1G05, 6 comm error
1748	1320	String one comm error S1G03,04,05,06,07,08,09,10
1749	1321	String one comm error S1G03,04,05,06,07,08,09,10
1801	1331	S1G04 comm error
1806	1336	S1G03 comm error
1826	1353	S1G05 comm error
1831	1358	String one comm error S1G03,04,05,06,07,08,09,10
1835	1361	S1G06 comm error
1848	1373	S1g03,4,5,6,7,8,9,10 comm error
1920	1401	Power down for a whale
1921	1402	Mitigation gun 40 in3
1928	1409	Full source 6250 in3
1935	1412	S1G05 comm error
1937	1415	S1G01 comm error
2029	1463	S1G03 comm error
2033	1467	S1G09 comm error
2034	1468-1479	S4G01 no fire
2047	1480	S4G01 disabled vol=5890in3
2114	1504	S1G10 comm error
2115	1505	S1G10 comm error
2148	1535	S1G06 comm error
2249	1591	S1G1-4, G10 comm error
2311	1611	S3G09 comm error
2316	1615	S1G07 comm error
2333	1630	S1G04 comm error
0007	1660	S1G04 comm error

0018	1670	S1G08 comm error
0044	1693	S1G06 comm error
0049	1697	S1G04 comm error
0111	1717	S1G08 comm error
0141	1744	S1G07 comm error
0229	1786	S1G04 comm error
0237	1793	S1G10 comm error
0325	1835	S1G08 comm error
0337	1846	S3G09 comm error
0359	1865	S1G06 comm error
0411	1875	S1G06 comm error
0415	1879	S3G10 comm error
0421	1884	S1G06 comm error
0430	1892	S1G07 comm error
0452	1910	S1G04 comm error
0452	1911	S1G08 comm error
0500	1917	S1G06 comm error
0523	1936	S1G08 comm error
0534	1946	S1G07 comm error
0536	1948	S3G08 comm error
0540	1951	S1 comm error all guns
0605	1973	S1 comm error all guns
0624	1989	S1G03 comm error
0629	1993	S1G03 comm error
0630	1994	S1G04 comm error
0634	1997	S1G6-10 comm error
0635	1998	S1G6-10 comm error
0635	1999	S1G 6-10 comm error
0645	2007	S1-6,9 comm error
0647	2008	S1G04 comm error
0713	2030	S1G07 comm error
0714	2031	S1G04 comm error
0723	2038	S1G10 comm error
0724	2039	S1G03 comm error
0731	2045	S1G6-9 comm error
0732	2046	S1 all guns comm error
0739	2052	S1G07 comm error
0742	2055	S1G07 comm error
0750	2062	S1G1,2,6,9 comm error
0800	2071	S1 comm error all guns
0802	2072	S1G03,4,5,6,7,8,9,10 comm error
0814	2083	S1G03,6 comm error
0821	2089	S1G06 comm error
0824	2092	S1G06,7 comm error
0825	2093	S1G08 comm error
0831	2098	S1G06,7 comm error
0832	2099	S1G06,7,8 comm error
0846	2113	S1G05,6,7,8,9,10 comm error
0847	2113	S1g03,4,5,6,7,8,9,10 comm error
0849	2114	S1G05,6,7,8,9,10 comm error
0850	2115	S1G10 comm error
0919	2141	S1G03,6,9 comm error
0921	2143	S1G04,5,6,7,8,9,10 comm error
0926	2147	S1G04,5,6,7,8,9,10 comm error
0933	2153	S1G06,09 comm error
0950	2168	S1G09 comm error
0953	2171	S1G04,5,6,7,8,9,10 comm error
1000	2177	S1G06 comm error
1009	2185	S1G03,06 comm error

1013	2189	S1G03,5,6 comm error
1014	2190	S1G07,8,9 comm error
1020	2195	S1g06,9 comm error
1023	2198	S1G03,5,6 comm error
1045	2217	S1G03 comm error
1046	2218	S1g04,5,6,10 comm error
1048	2220	S1G08,9,10 comm error
1051	2223	S1G04,5,6,7,8,9,10 comm error
1058	2229	S1G07,8,9 comm error
1059	2230	S1G05,6,7,8 comm error
1104	2234	S1G07,8,9,10 comm error
1106	2236	S1G07 comm error
1109	2239	S1G07,8 comm error
1116	2245	S1g6,7,8,9,10 comm error
1146	2272	S14,5,6 comm error
1150	2275	S1 8,9 comm error
1156	2281	S1 3,4,5,6,7,8,9,10 comm error
1200	2284	S1 4,5,6,7,8,9,10 comm error
1201	2285	S1 3,6,9 comm error
1209	2292	S1G04 comm error
1212	2295	S3G10 comm error
1217	2299	S1 3,6,9, comm error
1220	2302	S1 g03,6 comm error
1222	2304	S1 g09,10 comm error
1226	2307	S1G05,6,7,8, comm error
1228	2309	SG04,5,6 comm error
1236	2316	S1 g01,3,4,7,8,9,10 comm error
1251	2330	S1G03 comm error
1304	2341	S1G04,5,6,7,8,9,10 comm error
1334	2368	S1G09,10 comm error
1344	2377	S3G06 comm error
1451	2437	S1 g4,5,6,7,8,9,10Comm error
1452	2438	S1 g8,9,10 comm error
1516	2459	S1 g5,6 comm error
1540	2480	S3G06 comm error
1541	2481	S1G03,5,4,5,6,7 comm error
1544	2484	S1G06,7,8 comm error
1559	2497	EOL MGL1111 OBS02 Seq 021 Vol 5890 in3

Observers Log

Vessel	Marcus G. Langseth
Client	USGS
Area	Bering Sea, Alaska
Job Number	MGL1111 (USGS 2)

Chief Science Officer	David Martinson		
Science Officer	Bern McKiernan		
Acquisition Leader	Mark Wooley - 12:00-24:00	Bern McKiernan 00:00-12:00	
Navigation Leader	David Ng 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	93	95	FGSP	928
SP #	908	1876	LGSP	1876

Line	MCS14
Sequence	022
Direction	35

Streamer Parameters				
	1	2	3	4
Length (m)	8100			
Auxiliaries				
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	???			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600/in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9m
Source Separation	8m
COS to COS	

Recording Parameters	
Record Length	16sec
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
Date MM/DD/YY	08/30/11	08/30/11
Time UTC	1726	2301
Volume (cu in.)	40in3	6200in3
Wind (kts)	22	17
Sea State (m)	1-2m	1-2mm
Water Depth (m)	1110m	3839m

Cable	EOL High Noise Channels (in u-bar)
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 928 At start of line ramp up soft start was initiated. There was cable turn noise at SOL
Volume @ sol=40in3 d/t ramp-up
SOL NOISY CHANNELS 271, 389, 390
EOL Sp 1876
EOL NOISY CHANNELS

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP- First Good SP	LCSP - Last Chargable SP
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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	

