USGS SEISMIC LOG: CRUISE V1-09-CA

Aug-Sept 2009

FILES: _____

AREA: Mono Lake

DATE: Aug 28

CO-CHIEFS: Angela Jayko, Patrick Hart

Patrick Hart
Mike Boyle
James McClain
Michael Novick

LINE NUMBERS: ML-01
ML-05

FRIDAY

	JD	GMT TIME		
ENDING	240	2049		
STARTING	240	1754		

SAMPLE RATE	RECORD LENGTH	SHOT RATE	
10 kHz	275 MS	300m / SEC	
	RECORDING SYSTEM Triton SBL		

Source:
SIG Mini-sparker 200j
Edgetech 512 Chirp

Receiver: 30 phones X 15 f-1
Benthos

Source /receiver 25 m aft of antenna (mid point)
sparker 30m
receiver 21 m

COMMENTS Day 1, testing, 5 lines, PC died

WEATHER/SEA: Overcast, flat

CRUISE: V1-09-ML JD 240 FILE _____ Rec Length/ Fire Rate. 275/300 PAGE 1 OF _____

PING	GMT	Line Number	COMMENTS
	1754		Gear in water
			coming on line 300ms fire / 275 rec length
	1832	ML-01	SOL ML-01
	1840		power crash, sparker off
	1841		back on, data gap
	1852		EOL ML-01
			turning
	1855	ML-02	SOL ML-02
	1858		sparker off
	1900		back on
	1917		EOL ML-02
			turning
	1921	ML-03	SOL ML-03
	1935		power crash, sparker & SBL down
			reboot, turn to ML-04
	1955	ML-04	SOL ML-04
	2018		EOL ML-04
			power off to ✓ generator gas
	2035	ML-05	SOL ML-05
	2049		system crash
			end of day Return to dock to reconfigure lab

USGS SEISMIC LOG: CRUISE V1-09-CA

Aug-Sept 2009

FILES: _____

AREA: Mono Lake

DATE: Aug 30

CO-CHIEFS: Angela Jayko, Patrick Hart

Boyle
Hart
Novick

LINE NUMBERS: ML-06
ML-09

SUNDAY

	JD	GMT TIME		
ENDING	242	1912		
STARTING	242	1504		

SAMPLE RATE	RECORD LENGTH	SHOT RATE	
10 KHz	275 ~~30~~ MS	300 ms / SEC	
	RECORDING SYSTEM Triton SBL		

Source:
SIG Mini-sparker
Edgetech ~~512~~ Chirp

Receiver:
Midpoint 25 m aft of GPS antenna

COMMENTS: New PC. Source/receiver on booms, better separation ~15 ft

WEATHER/SEA: Clear flat in A.M.

CRUISE: V1-09-ML JD 242 FILE _____ Rec Length/ Fire Rate. 275/300 PAGE 2 OF _____

PING	GMT	Line Number	COMMENTS
	1504		Gear in water
	1514	ML-06	200; SOL ML-06
~17700			source pulse change?
	1653		EOL ML-06
			turning
	1656	ML-07	SOL ML-07 (tie line)
	1700		sparker off to move out on boom
	1703		back on
	1713		EOL ML-07
			turning
	1714	ML-08	SOL ML-08
	1721		sparker crash EOL
			EOL ML-08
			refuel generator, trim tips
			transit to SOL ML-09
	1849	ML-09	SOL ML-09
	1912		EOL ML-09
			turning
		~~ML-10~~	wind coming up END of Day

USGS SEISMIC LOG: CRUISE V1-09-CA

Aug-Sept 2009

FILES: _____

AREA: Mono Lake

DATE: Aug 31

CO-CHIEFS: Angela Jayko, Patrick Hart

Boyle
Hart
Novick

LINE NUMBERS: ML-10
ML-15

Monday

	JD	GMT TIME		
ENDING	243	2137		
STARTING	243	1540		

SAMPLE RATE	RECORD LENGTH	SHOT RATE	
	275 MS c/ 230	300 ms / SEC 250	
	RECORDING SYSTEM Triton SBL		

Source:
SIG Mini-sparker 200 j
Edgetech 512 Chirp

Receiver: Benthos

Source/receiver midpoint 25 m aft of GPS

COMMENTS: Late start, outboard problems,

WEATHER/SEA: Flat, clear in AM

CRUISE: V1-09-ML JD 243 FILE _____ Rec Length/ Fire Rate 275/300 PAGE 3 OF _____

PING	GMT	Line Number	COMMENTS
	1540		Gear in water
	1541	ML-10	SOL ML-10
10100			source pulse change
10500			source pulse back to normal
	1644		EOL ML-10
			Trim tips
			c/ fire & rec length (230/250)
	1654	ML-11	SOL ML-11
			ML-11 completes ML-08
	1757		EOL ML-11
			turning
	1804	ML-12	SOL ML-12
	1900		EOL ML-12
			systems off to refuel generators
	1933	ML-13	SOL ML-13
	1946		~~trim~~ off to trim tips; data gap
	1950		back on
	2043		EOL ML-13
			turning
	2044	ML-14	SOL ML-14
	2111		EOL ML-14
			trim tips
	2115		SOL ML-15
	2137		SOL ML-15 [illegible]

USGS SEISMIC LOG: CRUISE V1-09-CA

Aug-Sept 2009

FILES: _____

AREA: Mono Lake

DATE: Sept 1

CO-CHIEFS: Angela Jayko, Patrick Hart

Novick
Jayko
Hart
Boyle

LINE NUMBERS: ML-16
ML-24

	JD	GMT TIME		
ENDING	244	2157		
STARTING	244	1501		

Tuesday

SAMPLE RATE	RECORD LENGTH	SHOT RATE	
10 kHz	230 MS	250ms / SEC	
	RECORDING SYSTEM Triton SBL		

Source:
SIG Mini-~~sparker~~
Edgetech 512 Chirp

Receiver:

COMMENTS _____

WEATHER/SEA: Clear, warm, flat

CRUISE: V1-09-ML JD 244 FILE _____ Rec Length/ Fire Rate 280/250 PAGE 4 OF _____

PING	GMT	Line Number	COMMENTS
	1459		Gear in water
	1501	ML-16	SOL ML-16
	1606		EOL ML-16
			turning
	1615	ML-17	SOL ML-17
	1712		EOL ML-17
			trim tips
	1718	ML-18	SOL ML-18
	1816		EOL ML-18
			turning
	1817	ML-19	SOL ML-19
			very shallow
	1841		EOL ML-19
	1842	ML-20	SOL ML-20
			bend line around outcrops
			system off sparker crash EOL ML-20
			stop to refuel
	1917	ML-21	SOL ML-21
			very choppy 1-2 ft waves
	1946		EOL ML-21
			trim tips
	1951		SOL ML-22
	2049		EOL ML-22

CRUISE: V1-09-ML JD 244 FILE _____ Rec Length/ Fire Rate. 237/250 PAGE 5 OF _____

PING	GMT	Line Number	COMMENTS
	2049	ML-23	SOL ML-23
~6020			source pulse change
6500			back to normal
	2142		EOL ML-23
			turning
	2143	ML-24	SOL ML-24
	2157		EOL ML-24
			end of day

USGS SEISMIC LOG: CRUISE V1-09-CA

Aug-Sept 2009

FILES: _____

AREA: Mono Lake

DATE: Sept 2

CO-CHIEFS: Angela Jayko, Patrick Hart

Mike B
Pat H
Angela
Mike

LINE NUMBERS: ML-25

	JD	GMT TIME		
ENDING	245	2158		
STARTING	245	1455		

Wednesday

SAMPLE RATE	RECORD LENGTH	SHOT RATE	
10 kHz	230 MS	250 ms / SEC	
	RECORDING SYSTEM Triton SBL		

Source:
SIG Mini-sparker
Edgetech 512 Chirp 200 J

Receiver:

COMMENTS: Source/receiver offset reduced from 9m to ~3m
Midpoint still off 25m. Source ~26.5 receive ~23.5

WEATHER/SEA: Clear, flat in AM.

CRUISE: V1-09-ML JD 245 FILE _____ Rec Length/ Fire Rate 230/250 PAGE 6 OF 7

PING	GMT	Line Number	COMMENTS
	14:55		Gear in water, note that source to receiver offset reduced
	1513	ML-25	SOL ML-25
	1618		EOL ML-25
			system off to replace tips
			will do power test
	1633	ML-test	
1			100 j
217			200 j
360			300 j
480			400 j
			turning to ML-26
	~1645	ML-26	SOL ML-26
	1703		EOL
			turning to ML-27
	1707	ML-27	SOL ML-27
	1803		EOL ML-27
			system off to refuel
	1819		SOL ML-28
	1903		EOL ML-28
			turning to transit
	1919		SOL ML-29

CRUISE: V1-09-ML JD 245 FILE _____ Rec Length/ Fire Rate 230/280 PAGE 7 OF 7

PING	GMT	Line Number	COMMENTS
	1956		EOL ML-29
	2000	ML-30	SOL ML-30
	2044		EOL ML-30
	2045	ML-31	SOL ML-31
	2111		off to refuel sparker generator; data gap
	2116		Back on
	2137		EOL ML-31
	2137	ML-32	SOL ML-32
	2158		EOL ML-32
			end of day

USGS SEISMIC LOG: CRUISE V1-09-CA

Aug-Sept 2009

FILES: _____

AREA: Mono Lake

DATE: 9/3/09

CO-CHIEFS Angela Jayko, Patrick Hart

Jim M
Mike B
Mike
Jon C
Chris T

LINE NUMBERS: ML-33

	JD	GMT TIME	
ENDING	246	2204	ML 42
STARTING	246	1521	ML 33

SAMPLE RATE	RECORD LENGTH	SHOT RATE	
10 kHz	230 MS	250 / SEC	
	RECORDING SYSTEM Triton SBL		

Source:
SIG Mini-sparker 200 Joule
Edgetech 512 Chirp

Receiver: Benthos MESH-30

COMMENTS Childs/Turner

WEATHER/SEA: 8:15am - flat calm, glassy - all day

CRUISE: V1-09-ML JD _____ FILE ML-33 Rec Length/ Fire Rate. 230/250 PAGE 1 OF 2

PING	GMT	Line Number	COMMENTS
ϕ	1523	ML-33	316° 3.2 KT 13' WD
~800	1525		c/cse stitching @ 000 and 090
2175	1532		c/cse to 000
4425	1541 30		c/cse to 090
4980	1543 45		on cse
6190	1548 45		c/cse to 000
6675	1550 30		on cse
7930	1556		c/cse
8580	1558 30		c/cse
10130	1605		c/cse slowly
12375	1614 30		EOL
ϕ	1619 30	ML-34	SOL ML-34 126° 5.9 KT
12900	17:35		EOL
			Power off to trim tips
ϕ	1720	ML-35	SOL ML-35 230° @ 5.0 KT
	1740		@ 5.5 KT
11775	1809 15		EOL
ϕ	1811 30	ML-36	SOL ML-36 310° @ 6.0 KT
5370	1833 30		EOL ML-36 Genset out
			Genset refuel
		ML-36A	Error in file name - delete file
ϕ	1854 30	ML-36B	SOL ML-36B continuation 36
	1857		over landslide // Poaha I

CRUISE: V1-09-ML JD _____ FILE ML-36B Rec Length/ Fire Rate. 230/250 PAGE 2 OF 2

PING	GMT	Line Number	COMMENTS
6000	1919	ML-36B	✓ well imaged structure
6850	1923	ML-36B	EOL
ϕ	1923 40	ML-37	SOL 225° @ 5.5 KT
550	1926		possible deep structure @ 100 ms
4320	1941		EOL – Trim tips between lines
ϕ	1949 30	ML-38	SOL 130° @ 5.3 KT
2272	1959 [illegible]		EOL
ϕ	1959 55	ML-39	SOL(39) 50° @ 5.5 KT
~8150	2033		s/cse 90°
9200	2038 00		EOL
ϕ	2038 59	ML-40	SOL 230° @ 5.5 KT
7200	2108 50		EOL Refueled gen set
ϕ	2115 15	ML-41	SOL 310° @ 5.5 KT
~4000	2130		wind starting to pick up
5700	2139 15	ML-41	EOL
ϕ	2144 15	ML-42	SOL 130° @ 5.5 KT 22 ft WD
4875	2204 30	ML-42	EOL

USGS SEISMIC LOG: CRUISE V1-09-CA

Aug-Sept 2009

FILES: _____

AREA: Mono Lake

DATE: 9/4/09

CO-CHIEFS Angela Jayko, Patrick Hart

Jim M
Mike B
Jon C
Angela
Marcos

LINE NUMBERS: ML-43

	JD	GMT TIME	
ENDING	247	2100	ML59
STARTING	247	1520	ML 43

SAMPLE RATE	RECORD LENGTH	SHOT RATE	
10 kHz	230 MS	250 / SEC	
	RECORDING SYSTEM Triton SBL		

Source:
SIG Mini-sparker
Edgetech 512 Chirp 200 J,

Receiver: Benthos Model-30

COMMENTS last ~ 1 hr sparker tripping on HV fault; finally decided to return to track - fortuitously ahead of thunderstorm and high winds

WEATHER/SEA: v. calm in am

CRUISE: V1-09-ML JD 247 FILE _____ Rec Length/ Fire Rate. _____ PAGE 1 OF 4

PING	GMT	Line Number	COMMENTS
	0800		on the water - flat calm
ϕ	1521[30]	ML-43	SOL 050° 5.5 KT
3260	1535[00]		EOL
ϕ	1538[15]	ML-44	SOL 310° @ 5.5
~2660	15:49:37		Edge of bottom reflector
3360	1552[15]		EOL
ϕ	1554[00]	ML-45	SOL 130° @ 5.5
1989	1602:00		deeper arrivals
6100			FAULT? distinct scarp in subsurface,
			infilled w/ lake ooze
8000	1627	ML-45	EOL trim tips between lines
ϕ	1638[00]	ML-46	SOL 060° @ 5.5
1100		ML-46	another distinct scarp in SS
			screen capture 800-2300 ping
2780	1649	ML-46	EOL
ϕ	1653[30]	ML-47	SOL 240° @ 5.5
1500			vicinity of fault trace ??
3020	1705[50]	ML-47	EOL
ϕ	1711	ML-48	SOL 060° @ 3.0
220	1711[55]		x shore topo lineament
1600	1717		speed up to 5.5
3830	1727	ML-48	EOL

CRUISE: V1-09-ML JD 247 FILE _____ Rec Length/ Fire Rate. 230/250 PAGE 2 OF 4

PING	GMT	Line Number	COMMENTS
ϕ	1732 15	ML-49	SOL 240° @ 5.5 KT
2800	1743 50	ML-49	EOL
ϕ	1749	ML-50	SOL 060° @ 6.0 KT
2350	1758 30	ML-50	EOL
ϕ	1819 15	ML-51	SOL 240° @ 5.8 KT
1050			interesting bottom feature
			screen capture ML-51_1050.jpg
2750	1831	ML-51	EOL
ϕ	1834 50	ML-52	SOL 060° @ 6 KT
1175			gas bubbles observed
1700	1842		v. distinct feature at
3450	1849	ML-52	EOL Trim
	1852		sparker tips trimmed
ϕ	1855	ML-53	SOL 240°
1400	1901:00		graben east side screen capture
2070	1903.20		graben west side ML-53_1700
3570	1910	ML-53	EOL
ϕ	1913 15	ML-54	SOL 060° 6 KT
1550			narrow "graben"
2750	1925 15	ML-54	EOL
900			edge of "graben
1050			
1110			

CRUISE: V1-09-ML JD 247 FILE _____ Rec Length/ Fire Rate. 230/250 PAGE 3 OF 4

PING	GMT	Line Number	COMMENTS
ϕ	1935	ML-55	SOL 130°
900			edge of "graben" feature
1050			sparker shutdown
1110			back on line
1650			edge
1950	1943		EOL
ϕ	~1945	ML-52	SOL 310° ⊙
			sparker off ~ 20 sec
	~1949		sparker HV fault
2200	1953	ML-52	EOL " " " "
			sparker maintenance
ϕ	2005	ML-57	SOL 130°
1250			edge of feature
1870			" " " "
2120			" " reemerged feature
3000	2017[45]	ML-57	EOL sparker shutdown
ϕ	2022	ML-59	SOL transit 090 5.5
1020			sparker pulse suddenly changes, then
1450			c/case 130°
2050	2030		sparker HV fault
3000	2034[20]	ML-58	" " " " EOL

CRUISE: V1-09-ML JD 247 FILE _____ Rec Length/ Fire Rate. 230/250 PAGE 4 OF 4

PING	GMT	Line Number	COMMENTS
Ø	2044	ML-59	SOL 050°
750			c/cse 140°
1540			c/cse 230°
2100			HV fault
2900			" "
3390			" "
3710			c/cse
3900	2100	ML-59	HV fault EOL

USGS SEISMIC LOG: CRUISE V1-09-CA

Aug-Sept 2009

FILES: _____

AREA: Mono Lake

DATE: 9/5/09

CO-CHIEFS: Angela Jayko, Patrick Hart

Jim M
Mike B
Chris T
Angela
Marjorie B
Jon C

LINE NUMBERS: ML-60

	JD	GMT TIME		
ENDING	248	2046		
STARTING	248	1640		

SAMPLE RATE	RECORD LENGTH	SHOT RATE	
	_____ MS	_____/ SEC	
	RECORDING SYSTEM Triton SBL		

Source: 200 Joule
SIG Mini-sparker
Edgetech 512 Chirp

Receiver: Benthos Mesa-30

COMMENTS: left dock @ 0730; problems w/ sparker gen set; returned to beach for spare - late start

WEATHER/SEA: 0730 - calm, cloudless; 0930 light wind

CRUISE: V1-09-ML JD 248 FILE _____ Rec Length/ Fire Rate. 230/2520 PAGE 1 OF _____

PING	GMT	Line Number	COMMENTS
ϕ	1640 30	ML-60	SOL 020° 5.5 KT
4320	1655 15	ML-60	EOL
ϕ	1659	ML-61	SOL 303°
2070	1707		slow to 4 kt
4100	1716	ML-61	EOL
ϕ	1721 30	ML-62	SOL 131° @ 5 KT
3150	1731 30	ML-62	EOL
ϕ	1735	ML-63	SOL 163
2950	1747 20	ML-63	EOL
ϕ	1748 30	ML-64	SOL 183° @ 5.5 KT
6640	1816 15		c/c to 280°
6700			prominent layers w/ sediment
9225	1827		close to
10000	1830		EOL to fuel gen set - no trim
ϕ	1852	ML-65	SOL 220° @ ~~3 KT~~ 4.6 KT
1240			c/cse maneuvering
2240	1901 50		new/cse 040° @ 2 KT up to 4 KT
4000			c/cse
4600	1911 40		new/cse 220° @ 3 KT
6580	1920		maneuvering
7385	1923		new/cse 041° @ 4.5 KT (@ 7600)
9350	1931 30		EOL
129	1934 16	ML-66	SOL 300° @ 5.9 KT

CRUISE: V1-09-ML JD 248 FILE _____ Rec Length/ Fire Rate. 230/250 PAGE 2 OF 2

PING	GMT	Line Number	COMMENTS
4458	195218	ML-66	EOL
ϕ	195240	ML-67	SOL 240° @ 5.5 KT
2700	2000		EOL
ϕ	201130	ML-68	SOL 060° @ ~3 KT 35'
500			c/spd to 5.9 KT
2890	202315	ML-68	EOL
ϕ	2027	ML-69	SOL 245° 5.5 KT
2300	203630	ML-69	EOL
ϕ	204030	ML-70	SOL 060 @ 5.5 KT
1650	204630	ML-70	EOL End of program