

UNIVERSITY OF TEXAS
INSTITUTE FOR GEOPHYSICS
AUSTIN, TEXAS

LINE INFORMATION
LOG

R. V. FRED H. MOORE

CRUISE FM35-07

AUGUST 7 – 13, 1987

THE UNIVERSITY OF TEXAS AT AUSTIN
INSTITUTE FOR GEOPHYSICS
R. V. FRED H. MOORE

LINE INFORMATION

CRUISE FM3507 LINE # 9 COURSE 344°
BONIN ARC/
PROJECT Student Cruise AREA Bonin Arc P.I. E. W. Behrens

	START (219)	END (219)	TOTAL
DATE(JD/DATE)	<u>7</u> August 1987	<u>7</u> August 1987	
TIME(Z)	<u>04:21</u>	<u>16:14</u>	<u>11 hr 53 m</u>
LATITUDE	<u>30 34.60</u>	<u>31 22.40</u>	<u>*uncalibrated</u>
LONGITUDE	<u>140 07.82</u>	<u>140 00.1</u>	
SHOTPOINT	<u>0001</u>	<u>2137</u>	<u>2137 shots</u>
REC NUM	<u>0001</u>	<u>2137</u>	<u>2137 recs.</u>
TAPE NUM	<u>357001</u>	<u>357019</u>	<u>19 tapes.</u>
WATER DEPTH	<u>1481m</u> <u>620</u>	<u>885m</u> <u>1725</u>	
DATA LENGTH (SEC) MIN	<u>8</u>	MAX <u>0</u> <u>water delay</u>	SAMP RATE (MSEC) <u>2</u>
SHOOTING BY TIME	<u>✓</u>	DISTANCE	
REP RATE (SEC)	<u>20</u>	(M) <u>41.2</u>	FOLD(NOMINAL) <u>39</u>
SEIS TRACES	<u>1 - 96</u>	AUX TRACES <u>-1 - -16</u>	PROBLEM TRACES <u>11, 36, 85, 72, 30</u> <u>86, 61, 12, 25, 67</u>
SINGLE CHANNEL MONITOR TRACE #	<u>96</u>		
DISTANCE TO NEAR TRACE (M)	<u>?</u>		
DISTANCE TO FAR TRACE (M)	<u>?</u>		
SOURCE INFO	<u>1 2000 cu. in air gun @ 2000 psi = 2000 cu. in.</u>		

NAVIGATION SYSTEM INFO LORAN - C - end points & way points (turns & OBSs)
COMMENTS: were pre-calibrated with satellite data before shooting, for
course guidance and maintenance. Data on these sheets
are raw LORAN coordinates. Calibration of Logger tapes
is planned post cruise.

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LINE INFORMATION

CRUISE FM3507 LINE # 8 COURSE 172
BONIN ARC/
PROJECT Student Cruise AREA Bonin Arc P.I. E. W. Behrens

	<u>START</u>	<u>END</u>	<u>TOTAL</u>
DATE(JD/DATE)	<u>279</u> ⁽⁷⁾ August 1987	<u>220</u> ⁽⁸⁾ August 1987	
TIME(Z)	<u>18:28:07.6</u> ⁴⁶	<u>5:07:39</u> ^{47.5}	<u>10 hr. 40 m.</u>
LATITUDE	<u>31 21.59N</u> ⁴⁶	<u>30 31.49</u>	<u>*uncalibrated</u>
LONGITUDE	<u>139 50.53E</u> ⁴⁸	<u>139 58.50</u>	
SHOTPOINT	<u>0001</u>	<u>1920</u>	<u>1920 shots</u>
REC NUM	<u>0001</u>	<u>1920</u>	<u>1920 rec's</u>
TAPE NUM	<u>357020</u>	<u>357035</u>	<u>16 18 tapes</u>
WATER DEPTH	<u>1530</u> ¹⁶⁵⁰ - ²²⁸⁸ <u>2025</u>		
DATA LENGTH (SEC) MIN	<u>8</u>	MAX <u>0</u> ^{water delay}	SAMP RATE (MSEC) <u>2</u>
SHOOTING BY TIME	<u>✓</u>	DISTANCE	
REP RATE (SEC)	<u>20</u>	(M)	FOLD(NOMINAL) <u>39</u>
SEIS TRACES	<u>1 - 96</u>	AUX TRACES <u>-1 - -16</u>	PROBLEM TRACES <u>98, 81, 88, 22, 30, (noisy)</u> <u>2, 10, 12, 25, 63</u>
SINGLE CHANNEL MONITOR TRACE #	<u>96</u>		
DISTANCE TO NEAR TRACE (M)	<u>?</u>		
DISTANCE TO FAR TRACE (M)	<u>?</u>		
SOURCE INFO	<u>2 2000 cu. in. AIR GUN at 2000 fsi = 4000 cu in.</u>		
NAVIGATION SYSTEM INFO	<u>LORAN - C</u>		

COMMENTS:

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LINE INFORMATION

CRUISE FM3507 LINE # 1 COURSE 84°
BONIN ARC/
PROJECT Student Cruise AREA Bonin Arc P.I. E. W. Behrens

	START	END	TOTAL
DATE(JD/DATE)	<u>9</u> ⁽²²¹⁾ August 1987	<u>9</u> ⁽²²¹⁾ August 1987	
TIME(Z)	<u>0429:09</u>	<u>13 22:04</u>	<u>8 53</u>
LATITUDE	<u>31 04.75N</u>	<u>31 07.75 N</u>	<u>* uncalibrated</u>
LONGITUDE	<u>141 35.46E</u>	<u>142 20.73 E</u>	
SHOTPOINT	<u>0001</u>	<u>1894</u>	<u>1894</u>
REC NUM	<u>0001</u>	<u>1894</u>	<u>1894</u>
TAPE NUM	<u>357036</u>	<u>357051</u>	<u>16</u>
WATER DEPTH	<u>4500-9399</u>	<u>7-8.5</u>	
DATA LENGTH (SEC) MIN	<u>8</u>	water delay MAX <u>4/6, 7, 8</u>	SAMP RATE (MSEC) <u>2</u>
SHOOTING BY TIME	<input checked="" type="checkbox"/>	DISTANCE	<u>48-40</u>
REP RATE (SEC)	<u>14/16/17/18</u> (M)	FOLD(NOMINAL)	<u>48/48</u>
SEIS TRACES	<u>1 - 96</u>	AUX TRACES	<u>-1 - -16</u>
PROBLEM TRACES			
SINGLE CHANNEL MONITOR TRACE #	<u>96</u>		
DISTANCE TO NEAR TRACE (M)			
DISTANCE TO FAR TRACE (M)			
SOURCE INFO	<u>1 Bolt 2000psi 2000 cu in towed at about 20' depth.</u>		
NAVIGATION SYSTEM INFO	<u>LORAN C</u>		
COMMENTS:			

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LINE INFORMATION

CRUISE FM3507 LINE # 2 COURSE 264
BONIN ARC/
PROJECT Student Cruise AREA Bonin Arc P.I. E. W. Behrens

	START	END	TOTAL
DATE(JD/DATE)	<u>221</u> ⁽⁹⁾ August 1987	<u>222</u> ⁽¹⁰⁾ August 1987	
TIME(Z)	<u>1501.2</u> ^{17.5}	<u>1646.2</u> ^{16:45:11.3}	<u>25 hr 45m</u>
LATITUDE	<u>31 05.48</u>	<u>-30 51.56 N</u>	<u>*uncalibrated</u>
LONGITUDE	<u>142 14.15</u>	<u>140 16.16 E</u>	
SHOTPOINT	<u>0001</u>	<u>4600</u>	<u>4600</u>
REC NUM	<u>0002</u>	<u>4599</u>	<u>4599</u>
TAPE NUM	<u>357052</u>	<u>357090</u>	<u>39</u>
WATER DEPTH	<u>9000⁺m</u>	<u>1894 - 9300</u>	
DATA LENGTH (SEC) MIN	<u>8</u>	MAX <u>8 sec</u> ^{water delay decreasing to 0}	SAMP RATE (MSEC) <u>2</u>
SHOOTING BY TIME	<input checked="" type="checkbox"/>	DISTANCE	
REP RATE (SEC)	<u>20</u>	(M)	FOLD(NOMINAL) <u>37</u>
SEIS TRACES	<u>1 - 96</u>	AUX TRACES <u>-1 - -16</u>	PROBLEM TRACES
SINGLE CHANNEL MONITOR TRACE #	<u>96</u>		
DISTANCE TO NEAR TRACE (M)			
DISTANCE TO FAR TRACE (M)			
SOURCE INFO	<u>1 x 2000 cu. in. @ 2000 psi Towed on a 35' tether (~30 ft water depth)</u>		
NAVIGATION SYSTEM INFO	<u>Followed LORAN-C lat/long calibrated with SAT & GPS fixes to accomplish desired True OBS.</u>		
COMMENTS:	<u>Crossings, turning points, and end points.</u>		

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LINE INFORMATION

CRUISE FM 3507 LINE # 3 A COURSE 263
PROJECT STUDENT CRUISE XI
BONIN ARC II AREA BONIN ARC P.I. E.W. BEHRENS

	<u>START</u>	<u>END</u>	<u>TOTAL</u>
DATE(JD/DATE)	<u>10 Aug 87 (2222)</u>	<u>11 Aug 87 (2232)</u>	
TIME(Z)	<u>16:45:31.3 Z</u>	<u>00:24:49.2 Z</u>	<u>7 hr. 39 m</u>
LATITUDE	<u>30° 51.56' N</u>	<u>30° 47.82' N</u>	<u>* uncalibrated</u>
LONGITUDE	<u>140° 16.13' E</u>	<u>139° 41.08' E</u>	
SHOTPOINT	<u>4601</u>	<u>5979</u>	<u>1378</u>
REC NUM	<u>4600</u>	<u>5978</u>	<u>1378</u>
TAPE NUM	<u>357091</u>	<u>357 102</u>	<u>12</u>
WATER DEPTH	<u>1893 m</u>	<u>1376 - 2280</u>	
DATA LENGTH (SEC) MIN	<u>8</u>	MAX	SAMP RATE (MSEC) <u>2</u>
SHOOTING BY TIME	<u>✓</u>	DISTANCE	
REP RATE (SEC)	<u>20</u>	(M)	FOLD(NOMINAL) <u>37</u>
SEIS TRACES	<u>1-96</u>	AUX TRACES <u>-1 - -16</u>	PROBLEM TRACES
CINCE CHANNEL MONITOR TRACE #	<u>96</u>		
DISTANCE TO NEAR TRACE (M)			
DISTANCE TO FAR TRACE (M)			
SOURCE INFO	<u>1</u>	<u>2000 w. in Air gun @ 2000 psi</u>	
NAVIGATION SYSTEM INFO	<u>LOAN-C calibrated w/GPS & SAT NAV.</u>		

COMMENTS:

Line 3 had to be broken for about 2 hours for air gun repairs

The last two shots on 3A come close enough to the first two shots on 3B that it should be possible to overlap binning and not lose fold.

	SHOT	LAT	LONG
3A	5978	30 47.82	139 41.12
3A	5979	30 47.82	139 41.08
3B	5980	30 47.82	139 41.12
3B	5981	30 47.81	139 41.09

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LINE INFORMATION

CRUISE FM 3507 LINE # 3 B COURSE 264
PROJECT Student II / CRUISE II / BONIN ARC II AREA BONIN ARC P.I. E.W. Behrens

	<u>START</u>	<u>END</u>	<u>TOTAL</u>
DATE(JD/DATE)	<u>223 11 Aug 87</u>	<u>223 11 Aug 87</u>	
TIME(Z)	<u>02: 41: 29.2</u>	<u>07: 22: 29.2</u>	<u>4 hr 41m</u>
LATITUDE	<u>30° 47.82' N</u>	<u>30° 45.54' N</u>	<u>* uncalibrated</u>
LONGITUDE	<u>139° 41.12' E</u>	<u>139° 19.06' E</u>	
SHOTPOINT	<u>5980</u>	<u>6823</u>	<u>843</u>
REC NUM	<u>5979</u>	<u>6822</u>	<u>843</u>
TAPE NUM	<u>357 102</u>	<u>357 109</u>	<u>8</u>
WATER DEPTH	<u>1376 - 2280</u>		
DATA LENGTH (SEC) MIN	<u>8</u>	MAX	<u>SAMP RATE (MSEC) 2</u>
SHOOTING BY TIME	<u>✓</u>	DISTANCE	
REP RATE (SEC)	<u>20</u>	(M)	FOLD(NOMINAL) <u>37</u>
SEIS TRACES	<u>1-96</u>	AUX TRACES	<u>-1 - -16</u> PROBLEM TRACES
SINGLE CHANNEL MONITOR TRACE #	<u>96</u>		
DISTANCE TO NEAR TRACE (M)			
DISTANCE TO FAR TRACE (M)			
SOURCE INFO	<u>1 2000 m. in - air gun @ 2000 psi</u>		
NAVIGATION SYSTEM INFO	<u>LORAN-C calibrated w/GPS & SATNAV</u>		

COMMENTS:

SEE LINE 3A

2221
for all of
line 3

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BONIN ARC/
PROJECT Student Cruise AREA Bonin Arc P.I. E. W. Behrens

	<u>START</u>	<u>END</u>	<u>TOTAL</u>
DATE(JD/DATE)	<u>223</u> ¹¹ August 1987	<u>224</u> ¹² August 1987	
TIME(Z)	<u>1207 1203:53z</u>	<u>00:54:33.5z</u>	<u>12 hr. 51 m.</u>
LATITUDE	<u>30 52.7 N</u>	<u>30 55.98</u>	<u>* uncalibrated</u>
LONGITUDE	<u>139 16.8</u>	<u>140 15.94 E</u>	
SHOTPOINT	<u>0001</u>	<u>2313</u>	<u>2313 shots</u>
REC NUM	<u>0001</u>	<u>2313</u>	<u>2313 rec's</u>
TAPE NUM	<u>35 7110</u>	<u>35 7129</u>	<u>20 tapes</u>
WATER DEPTH	<u>1622</u> ¹¹⁷⁰	<u>1844</u>	
DATA LENGTH (SEC) MIN	<u>8</u>	<u>MAX</u>	<u>SAMP RATE (MSEC) 2</u>
SHOOTING BY TIME	<input checked="" type="checkbox"/>	<u>DISTANCE</u>	
REP RATE (SEC)	<u>20</u>	<u>(M)</u>	<u>FOLD(NOMINAL) 37</u>
SEIS TRACES	<u>1 - 96</u>	<u>AUX TRACES -1 - -16</u>	<u>PROBLEM TRACES</u>
SINGLE CHANNEL MONITOR TRACE #	<u>96</u>		
DISTANCE TO NEAR TRACE (M)			
DISTANCE TO FAR TRACE (M)			
SOURCE INFO	<u>Two 6-gun arrays (Σ 2130 cu. in.) @ > 1900 psi</u>		
NAVIGATION SYSTEM INFO	<u>LORAN-C - satellite calibrated</u>		
COMMENTS:			

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BONIN ARC/
PROJECT Student Cruise AREA Bonin Arc P.I. E. W. Behrens

	<u>START</u>	<u>END</u>	<u>TOTAL</u>
DATE(JD/DATE)	<u>224/12 August 1987</u>	<u>224 August 1987</u>	
TIME(Z)	<u>0421:09</u>	<u>1737:48</u>	<u>13hrs 16min.</u>
LATITUDE	<u>31 02.35N</u>	<u>30 59.64</u>	<u>* un calibrated</u>
LONGITUDE	<u>140 14.72</u>	<u>139 14.82</u>	
SHOTPOINT	<u>0001</u> ^{1-7 may be} _{mis numbered}	<u>1909</u>	<u>1909 shots</u>
REC NUM	<u>0001</u>	<u>1900</u>	<u>1900 rec's</u>
TAPE NUM	<u>357130</u>	<u>357146</u>	<u>17</u> <u>10 tapes</u>
WATER DEPTH	<u>1755</u> ₇₀₁₋₁₈₀₀	<u>1758</u> _m	
DATA LENGTH (SEC) MIN	<u>8</u>	<u>MAX</u> _{water delay}	<u>SAMP RATE (MSEC) 2</u>
SHOOTING BY TIME	<u>✓</u>	<u>DISTANCE</u>	
REP RATE (SEC)	<u>25</u>	<u>(M)</u>	<u>FOLD(NOMINAL) 31</u>
SEIS TRACES	<u>1 - 96</u>	<u>AUX TRACES -1 - -16</u>	<u>PROBLEM TRACES</u>
SINGLE CHANNEL MONITOR TRACE #	<u>96</u>		
DISTANCE TO NEAR TRACE (M)			
DISTANCE TO FAR TRACE (M)			
SOURCE INFO	<u>1 6-gun array (1065 cu. in) + 1 2000 cu. in air gun = 3065 cu. in.</u>		
NAVIGATION SYSTEM INFO	<u>LORAN C - satellite calibrated</u>		
COMMENTS:			

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LINE INFORMATION

CRUISE FM3507 LINE # 6 COURSE FM 3507
BONIN ARC/
PROJECT Student Cruise AREA Bonin Arc P.I. E. W. Behrens

	<u>START</u>	<u>END</u>	<u>TOTAL</u>
DATE(JD/DATE)	<u>225 / 13 August 1987</u>	<u>225 / 13 August 1987</u>	
TIME(Z)	<u>0157:07</u>	<u>1452</u>	<u>1255</u>
LATITUDE	<u>31° 08.76' N</u>	<u>31° 10.31' N</u>	<u>* uncalibrated</u>
LONGITUDE	<u>139° 15.51' E</u>	<u>140° 18.89</u>	
SHOTPOINT	<u>0001</u>	<u>1925</u>	<u>1925</u>
REC NUM	<u>0001</u>	<u>1923</u>	<u>1923</u>
TAPE NUM	<u>357147</u>	<u>357162</u>	<u>16</u>
WATER DEPTH	<u>1397m</u>	<u>138m</u>	<u>1819m</u>
DATA LENGTH (SEC)	MIN <u>8</u>	MAX <u>water delay</u>	SAMP RATE (MSEC) <u>2</u>
SHOOTING BY TIME	<u>✓</u>	DISTANCE	
REP RATE (SEC)	<u>24</u>	(M)	FOLD(NOMINAL) <u>32</u>
SEIS TRACES	<u>1 - 96</u>	AUX TRACES	<u>-1 - -16</u> PROBLEM TRACES
SINGLE CHANNEL MONITOR TRACE #	<u>96</u>		
DISTANCE TO NEAR TRACE (M)			
DISTANCE TO FAR TRACE (M)			
SOURCE INFO	<u>2000 in³ AIR GUN + ARRAY (6 guns, 1065 in³) ~ 3000 in³</u>		
NAVIGATION SYSTEM INFO	<u>LORANC corrected from TDS w/ satellite calibration.</u>		
COMMENTS:			