

3.3. RECORD OF OPERATIONS



PROTECTED SPECIES RECORDING FORM
OPERATIONS

Regulatory reference number OCS-G32689 32690 18730 17001 18731 25253 18737
Project number UMS04081

Vessel name Geodetic Surveyor
Operations page number 1 of 2

Date	Time pre-shooting visual monitoring began	Time pre-shooting visual monitoring ended	Time pre-shooting acoustic monitoring began	Time pre-shooting acoustic monitoring ended	Was it day or night in period prior to firing?	Reason for firing s = survey t = test x = test followed immediately by survey	Time soft start / ramp-up began	Time soft start / ramp-up ended	Time of start of line / test	Time of end of line / test	Time gun(s) disabled after line / test	Time mitigation gun enabled / source output reduced	Time mitigation gun disabled / end of reduced output	Was any mitigation action required?
2011-08-08	22:10	22:40			day	s	22:40	23:02	0:53					
2011-08-09										1:52	1:52	1:52	1:55	
2011-08-09					night	s	1:55	2:16	2:19	3:10	3:10	3:10	3:30	
2011-08-09					night	s	3:30	3:51	3:56	5:00	5:00	5:00	5:33	
2011-08-09						s			5:33	6:20				
2011-08-09						s			6:55	8:00	8:00	8:00	8:30	
2011-08-09					night	s	8:30	8:51	9:05	9:33	9:33	9:33	11:30	
2011-08-09					night	s	11:30	11:51	12:23	13:30	13:30	13:30	13:40	
2011-08-09	13:10	13:40			day	s	13:40	14:01	14:04	14:50	14:50	14:50	15:00	
2011-08-09	14:30	15:00			day	s	15:00	15:21	15:25	16:26	16:26	16:26	16:35	
2011-08-09	16:05	16:35			day	s	16:35	16:56	17:01	17:32	17:32	17:32	18:30	
2011-08-09	18:00	18:30			day	s	18:30	18:51	19:05	19:55	19:55	19:55	20:10	
2011-08-09	19:40	20:10			day	s	20:10	20:31	20:41	21:34	21:34	21:34	21:45	
2011-08-09	21:15	21:45			day	s	21:45	22:06	22:08	23:05				
2011-08-09						s			23:33	23:34				
2011-08-09						s			0:12					
2011-08-10										0:16				
2011-08-10						s			1:18	2:08				
2011-08-10						s			2:49	3:21				
2011-08-10						s			4:13	5:23				
2011-08-10						s			6:49	8:11				
2011-08-10						s			9:37	10:10				
2011-08-10						s			11:02	12:18				
2011-08-10						s			13:09	14:28				
2011-08-10						s			14:54	16:18				
2011-08-10						s			17:01	18:19				



**PROTECTED SPECIES RECORDING FORM
OPERATIONS**

Regulatory reference number OCS-G32689 32690 18730 17001 18731 25253 18737
 Project number UMS04081

Vessel name Geodetic Surveyor
 Page number 2 of 2

Date	Time pre-shooting visual monitoring began	Time pre-shooting visual monitoring ended	Time pre-shooting acoustic monitoring began	Time pre-shooting acoustic monitoring ended	Was it day or night in period prior to firing?	Reason for firing s = survey t = test x = test followed immediately by survey	Time soft start / ramp-up began	Time soft start / ramp-up ended	Time of start of line / test	Time of end of line / test	Time gun(s) disabled after line / test	Time mitigation gun enabled / source output reduced	Time mitigation gun disabled / end of reduced output	Was any mitigation action required?
2011-08-10						s			18:54	20:04				
2011-08-10						s			20:36	21:32				
2011-08-10						s			22:00	22:25				
2011-08-10						s			22:30	22:56				
2011-08-10						s			23:29					
2011-08-11										0:41				
2011-08-11						s			1:49	2:13				
2011-08-11						s			3:06	3:57				
2011-08-11						s			5:32	5:38	5:38			
2011-08-11	11:30	12:00			day	s	12:00	12:30	12:52	13:37				
2011-08-11						s			14:31	15:38				
2011-08-11						s			16:29	16:49				
2011-08-11						s			17:55	18:47				
2011-08-11						s			19:31	20:45				
2011-08-11						s			21:49	22:39				
2011-08-11						s			23:46					
2011-08-12										0:39				
2011-08-12						s			1:20	2:13	2:13			

3.4. LOCATION AND EFFORT

RPS

PROTECTED SPECIES RECORDING FORM
EFFORT

Regulatory reference number OCS-G32689 32690 18730 17001 18731 25253 18737
Project number UMS04081

Vessel name Geodetic Surveyor
Effort page number 1 of 1

Date	Visual or PAM	Observers' initials	Start of watch				End of watch				Wind speed (knots)	Wind direction	Beaufort scale	Swell (m)	Visibility (km)	Glare severity
			Time	Latitude	Longitude	Depth (m)	Time	Latitude	Longitude	Depth (m)						
2011-08-08	visual	ST, LB, RW	18:00	26.38433°N	090.76996°W	3401	01:05	26.49113°N	090.77711°W	2452	12	S	3	<2	>5	severe
2011-08-09	visual	ST, LB, RW	11:10	26.46529°N	090.78726°W	3157	01:05	26.48988°N	090.73825°W	2455	18	S	3	<2	>5	severe
2011-08-10	visual	ST, LB, RW	11:10	26.47845°N	090.78825°W	2292	01:05	26.41651°N	090.82934°W	2977	8	S	2	<2	>5	severe
2011-08-11	visual	ST, LB, RW	11:10	26.44750°N	090.85950°W	3014	01:05	26.47443°N	090.82928°W	2944	6	S	1	<2	>5	severe

3.5. RECORD OF DETECTION

RPS

PROTECTED SPECIES RECORDING FORM
DETECTION

Date	Project number	Time at first detection (UTC)	Time at last detection (UTC)	Visual detection number	Acoustic detection number
2011-08-08	UMS04081	18:00	18:06	1	n/a
Regulatory reference number OCS-G32689 32690 18730 17001 18731 25253 18737	Vessel name <i>Geodetic Surveyor</i>	Survey type other: 2D UHR		Observer(s) [REDACTED]	
Detection was made visually	Detection was first made visually by observer keeping a continuous watch				
Latitude of vessel 26.38433°N	Longitude of vessel 090.76996°W	Heading of vessel (degrees) 185		Water depth (metres) 3401	
Swell height (metres) <2m	Beaufort scale 3	Precipitation none	Visibility (km) >5km	Cloud cover (%) 20	Glare severity and direction moderate from S
Common name Pantropical spotted dolphin		Scientific name <i>Stenella attenuata</i>		Certainty of identification definite	
Total number 20	Number of adults 19	Number of juveniles 1	Bearing to animal(s) when first detected (degrees) 0	Range to animal(s) when first detected (metres) 1	
Description (include features such as overall size; shape of head; colour and pattern; size, shape, and position of dorsal fin; height, direction, and shape of blow; etc.) Dolphins were 1-2 meters in length with long light gray/white capes and clear spotting patterns on dorsal surface. Dorsal fins were falcate, beaks had prominent white tip.			Visual sighting and/or Acoustic detection details (note behavior, especially changes in relation to gun activity and distance from gun array) Dolphins were riding bow waves of vessel when observers began watch. Vessel was approaching location for probe deployment, and stopped moving when location was reached. Dolphins milled around the vessel for a few more minutes after vessel stopped, and then swam away off starboard bow. Guns were on board during sighting.		
Direction of travel / first approach (relative to vessel) parallel in same direction as vessel			Initial compass heading (degrees) 185	Final compass heading (degrees) 230	
Closest distance of animals to airguns/source (metres) n/a	Closest distance of animals to vessel (metres) 1		Source activity at initial detection not firing	Source activity at final detection not firing	
Time at closest approach (UTC) 18:00	Distance during soft start (m) First Closest Last n/a n/a n/a		Source mitigation action(s) required none	Strike avoidance maneuvers required no	
Duplicate detection? If yes, provide duplicate detection number no			Total duration animals observed in exclusion zone (HH:MM) 00:06	Total duration of production loss due to mitigation action (HH:MM) 00:00	
Other notes or comments Guns on board vessel at time of sighting.					

**PROTECTED SPECIES RECORDING FORM
DETECTION**

Date	Project number	Time at first detection (UTC)	Time at last detection (UTC)	Visual detection number	Acoustic detection number
2011-08-09	UMS04081	21:11	21:17	2	n/a
Regulatory reference number	Vessel name	Survey type		Observer(s)	
OCS-G32689 32690 18730 17001 18731 25253 18737	<i>Geodetic Surveyor</i>	other: 2D UHR		[REDACTED]	
Detection was made	Detection was first made				
visually	visually by observer keeping a continuous watch				
Latitude of vessel	Longitude of vessel	Heading of vessel (degrees)		Water depth (metres)	
26.46696°N	090.77066°W	91		3016	
Swell height (metres)	Beaufort scale	Precipitation	Visibility (km)	Cloud cover (%)	Glare severity and direction
<2m	1	none	>5km	30	moderate from W
Common name		Scientific name		Certainty of identification	
Unidentifiable dolphin		<i>n/a</i>		definite	
Total number	Number of adults	Number of juveniles	Bearing to animal(s) when first detected (degrees)	Range to animal(s) when first detected (metres)	
6	6	0	270	5000	
Description (include features such as overall size; shape of head; colour and pattern; size, shape, and position of dorsal fin; height, direction, and shape of blow; etc.)			Visual sighting and/or Acoustic detection details (note behavior, especially changes in relation to gun activity and distance from gun array)		
The dolphins appeared to be 1-2m in length. The dorsal fin was pointed and falcate on the middle of the back. They had a noticeable beak.			The dolphins were first spotted along an eddy line off our port. They were jumping and appeared to be caroling a bate ball. Some tail slapping was observed.		
Direction of travel / first approach (relative to vessel)			Initial compass heading (degrees)	Final compass heading (degrees)	
variable			0	0	
Closest distance of animals to airguns/source (metres)	Closest distance of animals to vessel (metres)	Source activity at initial detection		Source activity at final detection	
5000	6000	full power while on survey line		full power while on survey line	
Time at closest approach (UTC)	Distance during soft start (m)		Source mitigation action(s) required	Strike avoidance maneuvers required	
21:14	First	Closest	Last		
	n/a	n/a	n/a	none	
Duplicate detection? If yes, provide duplicate detection number	Total duration animals observed in exclusion zone (HH:MM)		Total duration of production loss due to mitigation action (HH:MM)		
no	00:00		00:00		
Other notes or comments					