

CRUISE RC21-03

MCS LINE # 102 ①

DATE NOVEMBER 14, 1977

ESP # 02A

Venezuela Basin.

RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
13:15	1	1/2 lb.	19.6	not recorded
13:17	2 ^(3?)	1/2 lb.	32.8	
13:18	3 ^(4?)	1/2 lb.	39.2	
13:19	5	1/2 lb.	45.9	
13:25	11	1/2 lb.	87.8	
13:29	15	"	115.7	
13:34	20	"	149.6	
13:39	25	"	183.3	
13:44	30	"	219.0	shot late
13:49	35	"	255.0	
13:54	40	"	291.5	
14:00	46	"	334.7	
14:04	50	"	363.6	
14:12	56	3 lbs.	421.5	begin 2 min. schedule after shot 55
14:14	57	"	436.1	
14:16	58	"	450.3	
14:18	59	"	465.1	
14:20	60	"	478.8	
14:21	61	"	487.3	

CRUISE RC21-03

MCS LINE # 102

(2)

DATE NOV. 14, 1977

ESP # 02 A

RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
14:22	63	31b.	493.4	airgun interference
14:24	64	"	507.7	
14:26	65	"	522.3	
14:28	66	"	536.9	
14:30	67	"	552.3	
14:32	68	"	565.2	
14:34	69	"	582.6	DUD : double transmission
14:36	71	9.1b	594.0	shot numbering faulty, double transmission
14:40	73	9 lb.	621.9	double transmission numbers jumping sequence
14:44	75	"	650.4	double trans. sequence jump
14:48	77	"	679.0	we are also logging each shot but sequence is faulty
14:53	83	"	714.6	did not record. problems
14:53	84	"	718.9	
14:54	85	"	721.2	
14:54	86	"	723.5	

CRUISE RC2103

MCS LINE # 103

DATE Nov. 14, 77

ESP #

C.O. Profile 5, South
Line 103

RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
2010:57	⁰³ 03	3 1/2	313.7	22 shots did
2017:06	06	"	335.7	not trip on mu.
2019:09	07	"	340.3	
2021:13	08	"	344.5	a.
2025:11	09	"	353.5	
2027:19	10	"	358.4	
2029:08	11	"	362.5	
2031:07	12	"	367.1	
2033:05	^{12?} 13	"	371.5	13 decoded as 12 1/2
2035:06	¹⁴ 04?		376.1	14 decoded as 04?
2037:09	15	"	380.6	
2039:10	16	"	383.4	
2041:10	17	"	383.4	17 = 91 Mounn wave sh-L
2043:08	18	"	383.44	
2045:09	19	"	383.4	
2047:08	20	"	383.21	
2049:09	21	"	383.11	
2051:09	22	"	383.00	

CRUISE *PC2103*
DATE *Nov. 14, 77*

MCS LINE # *103*

ESP # *COP # 5*
5016

RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
<i>2053.06</i>	<i>23</i>	<i>3 1/2</i>	<i>382.9</i>	<i>22 instead of</i>
<i>2055.09</i>	<i>23</i> <i>24</i>	<i>11</i>	<i>382.66</i>	
<i>2057.06</i>	<i>25</i>	<i>11</i>	<i>382.44</i>	
<i>2059.09</i>	<i>26</i>	<i>11</i>	<i>382.22</i>	
<i>2105</i>	<i>30</i>	<i>11</i>	<i>380.6</i>	
<i>2117</i>	<i>35</i>	<i>11</i>	<i>379.25</i>	
<i>2125</i>	<i>40</i>	<i>11</i>	<i>378.98</i>	
<i>2135</i>	<i>45</i>	<i>11</i>	<i>379.13</i>	
<i>2145</i>	<i>50</i>	<i>11</i>	<i>378.95</i>	
<i>2147</i>	<i>56</i>	<i>11</i>	<i>379.09</i>	
<i>2205</i>	<i>60</i>	<i>11</i>	<i>379.14</i>	
<i>2215</i>	<i>65</i>	<i>11</i>	<i>379.9</i>	
<i>2225</i>	<i>70</i>	<i>11</i>	<i>380.66</i>	
<i>2235</i>	<i>75</i>	<i>11</i>	<i>380.88</i>	
<i>2245</i>	<i>80</i>	<i>11</i>	<i>380.44</i>	
<i>2255</i>	<i>85</i>	<i>11</i>	<i>380.78</i>	
<i>2305</i>	<i>90</i>	<i>11</i>	<i>380.75</i>	
<i>2325</i>	<i>95</i>	<i>11</i>	<i>381.15</i>	

CRUISE RC 21-03

MCS LINE # 103

DATE Nov 14, 77

~~ESP~~ # COP # 55RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
23 35	105	3 lbs.	381.9	
39.31	107	"	380.6	
23 45	110	"	380.5	
23 55	115	"	380.4	
		Nov. 15		
0005	120	"	380.01	
0015 0015	125	"	379.7	
0025	130	"	380.2	
0035	135	"	381.4	
0045	140	"	380.9	
0055	145	"	380.8	
0105 0105	150	"	380.2	
0115	155	"	379.7	155, 156 clae. double transmission
0125	160	"	378.8	
0133	165	"	377.8	
0143	170	"	376.8	
0153	175	"	376.0	
0203	180	"	376.3	
0213	185	"	376.4	

CRUISE RC21-03

MCS LINE # 103

DATE NOV. 15, 1977

ESP # COP 55

RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
0223	190	3. lbs.	376.5	
0233	195	"	377.3	
0243	200	"	377.5	
0253	205	"	377.2	
0303	210	"	376.5	
0313	215	"	376.3	
0323	220	"	376.5	
0333	225	"	376.2	
0343	230	"	376.7	
0353	235	"	376.25	
0403	240		375.22	
0413	245		374.56	
0423	250		374.4	
0433	255		374.52	
0443	260		374.55	
0453	265		374.22	
0503	270		374.60	
0513	275		375.85	

CRUISE

PC 21-03

MCS LINE # 103

DATE

11/15/77

ESP # COP 58

RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
0523	280 282	3 lb ?	377.11	
0533	285		379.04	
0543	290		379.58	
0553	295		379.45	
0603	300		379.20	
0613	305		378.45	
0623	310		379.95	
0633	315		379.95	
0643	319	→ this is the shot # sent from NOAA base	378.50	→ NOAA base. They must have missed a trip in base on their shot counter didn't advance
0655	325		378.10	
0705	330		379.15	
0715	335		378.90	
0725	340		379.05	
0735	345		379.15	
0745	350		378.90	
0750	355		378.60	
0805	360		377.88	
0815	365		378.22	

CRUISE PC 21-03

MCS LINE # 103

DATE

11/15/77

ESP # COPS

RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
0827	370	3 lbs.	378.56	
0831	372	"	378.44	shot late
0837	375	"	378.44	
0847	380	"	378.22	
0857	385	"	378.65	
0907	390	"	378.45	
0917	395	"	378.23	
0927	400	"	378.22 378.22	
0937	405	"	378.33	
0947	410	"	378.64	
0957	415	"	378.56	
1007	420	"	378.11	
1017	425	"	378.28	
1027	430	"	378.39	
1037	435	"	378.40	
1039	436	"	378.71	shot late
1043	438	"	376.65	shot late 20 sec
1057	445	"	367.09	

CRUISE Re21-03

MCS LINE # 103

DATE 11/15/77

ESP # COP 5 S

RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
1107	450	3 lbs.	369.20	
1107	455	"	371.31	
1127	460	"	373.24	
1137	465	"	375.58	
1147	470	"	378.77	
1157	475	"	382.27	
1207	480	"	386.8	
1217	485	"	389.5	
1227	490	"	392.05	
1237	495	"	395.85	
1247	500	"	399.44	DUP possible double trip
1257	505	"	401.78	
1309	510	"	402.15	1 shot missed by Mucha is thus shot out of sequence
1319	515	"	399.69	
1329	520	"	398.23	
1339	525	"	396.55	
1349	530	"	395.27	
1359	535	"	393.88	
	538			tape did not advance

CRUISE RC21-03

MCS LINE # 103

DATE NOV. 15, 1977

ESP # C.O.P. 55

RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
1409	540	3 lbs.	393.0	
1419	545	3 lbs	392.77	
1429	550	"	391.44	
1439	555	"	389.33	
1449	560	"	387.88	
1459	565	"	386.66	
1509	570	"	385.44	
1519	575	"	383.98	
1529	580	"	381.55	
1539	585	"	380.33	
1549	590	"	379.22	
1559	595	"	378.60	
				Noti. missed one
				a more Moana
				wave shots at
				about shot 595 due
				TRX-1 didn't arrive
				at changeover.

CRUISE

MCS LINE # 104

DATE 15 NOV

ESP # COP 5M

CONRAD CLOCK ZEROED AT HALF HOUR
RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
18:36:06	2	9 lbs	~421	1st shot
18:40:10	3		433.4	
18:44:41	4		446	
18:48:08	5		458.8	
18:52:10	6		471.80	
18:56:10	7		484.65	
19:00:08	8		498.50	
19:04:08	9		511.40	
19:08:07	10		524.50	
19:12:13	11		538.60	
19:16:05	12		552.10	
19:20:05	13		565.8	
19:24:08	14		580.0	
19:28:08	15		594.05	
19:32:05	16	lost this shot, dex mode was out of sync.		
19:36:05	17	(probably)	623.01	
19:40:05	18	9 lb	637.60	

CRUISE 2103

MCS LINE # 104

DATE NOV 15/77

ESP # COP 54

RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
1940	18	missed		
	19	missed	666	missed
1948	20		666.14	
	21		694.70	
195605	22		694.70	
200005	23		708.6	
200405	24		722.45	
2008	25		743.60	
201205	26		751.57	
2029	29	9 lbs.	796.37	
2032	30	9 lbs.	813.32	
2036	31 missed 32		816.29	
2040	33		819.46	
	34	missed		
2048	35		819.98	
2052	36		818.62	
2056	37		816.07	
2100	38		813.11	
2104	39		810.02	

CRUISE

MCS LINE # 104

DATE _____

ESP # COP SM

RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
2108	40	9 lbs	806.61	
2112	41	"	803.21	
2120	42	"	8796.64	
2144	49	511	779.3	
2156	52	"	771.21	
2200	53	"	768.9	
2204	54	"	765.67	
2208	55	"	763.00	
2212	56	"	760.21	
2216	57	"	757.44	
2220	58	"	754.43	
2224	59	"	751.55	
2228	60	"	748.43	
2231	#	-	7458.1	Last shot. before Raydist calibration

CRUISE 2103

MCS LINE # 105

DATE

NOV 16/77

ESP #

1
~~00P~~RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
NOTE:	CALIBRATION BEFORE BEFORE CAL	BEFORE 1	ESP #1 1	CANE TOO LARGE CANE TOO SMALL AFTER CAL.
020808	4	1		
020907	5			
0210	6			
0210.13	6	1	118.7	
11.05	7		113.3?	
12.03	8		107.9	
13.04	9		101.7	
14.07	10	1	95.9	
0215.	11		85.0	GUN AT SAME MISSED TIME
0216.05	12		85.0	
0217.08	13		75.0	
18.08	14		75.0	
19.12	15		70.2	
20.07	16		66.4	
21.09	17		63.0	
22.07	18		60.1	

CRUISE 21-03

MCS LINE # 105

DATE 16 NOV 77

ESP # 1

RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
23.04	19	1	57.9	
24.08	20		56.2	(2,5002)
25.00	21		55.6	1.35 Nm (ROOM)
26.05	22		55.5 =	2.505 km
27.07	23		56.4	
28.06	24		58.0	
29.05	25		60.2	
30.07	26		63.1	
31.07	27		66.3	
02:32:06	28		70.4	
02:33:05	29		74.6	
02:34:05	30		79.4	
02:35:03	31		84.5	
02:36:05	32		89.8	
02:37:57	33		94.4	
02:38:02	34		100.3	
02:38:59	35		105.8	
02:40:02	36		111.9	

CRUISE 21-03

MCS LINE # 105

DATE 16 NOV 77

ESP # 1

RECORDING LOG

TIME	SHOT ^{Sec}	SHOT [#]	SIZE ^{SIZE}	RAYDIST	COMMENTS
02:40:	58	37	1 16	117.6	
02:42:	01	38		123.7	
02:43:	05	39	1	130.4	
02:44:	04	40		134.5	
02:45:	04	41		143.1	
02:46:	04	42		149.5	
02:46:	59	43		155.5	
02:48:	03	44		162.6	
02:49:	02	45		169.0	
02:50:	03	46		175.3	
02:51:	03	47		181.9	
02:52:	04	48		188.5	
02:53:	01	49		194.8	
02:54:	05	50		202.0	
02:54:	58	51		207.8	
02:56:	03	52		215.0	
02:56:	57	53		221.0	
02:58:	02	54		228.2	

CRUISE 2103

MCS LINE # 105

DATE 16 Nov. 77

ESP # 1

RECORDING LOG

TIME	SHOT #	Shot #	Shot SIZE	RAYDIST	COMMENTS
02:58:56	55	55	1 lb	234.3	1-70 1 lb 70
03:00:01		56		241.0	71-80 3 lb 30
03:01:01		57		248.2	81-83 9 lb 27
03:02:04		58		255.8	84-88 50 lb 150
03:03:01		59		262.3	89-93 60 lb 300
03:04:00		60		269.2	94 120 lb 697
03:04:58		61		275.9	
03:06:05		62		283.7	
03:07:02		63		290.3	
03:08:04		64		297.4	
03:09:03		65		304.5	
03:10:02		66		311.4	
03:11:01		67		318.1	
03:12:04		68		325.4	
03:13:06		69		332.8	
03:14:05		70		339.5	
03:17:59		71	3 lb	366.6	
03:20:04		72		381.1	

CRUISE ^{RC} 2103

MCS LINE # 105

DATE 16 Nov. 77

ESP # 1

RECORDING LOG

TIME	SHOT #	^{shot} #	^{shot} SIZE	RAYDIST	COMMENTS
03:22:03	73		3 lbs.	395.0	
03:24:16	74			410.5	
03:26:12	75			424.4	
03:28:07	76			438.0	
03:30:03	77			451.7	
03:32:06	78			466.1	
03:34:01	79			480.1	
03:36:03	80			494.6	
03:40:02	81		9 lbs	523.4	
03:44:09	82			552.5	
03:48:11	83			581.6	
03:52:09	84		30?	610.1	
03:56:08	85			639.0	
04:00:03	86			667.7	
04:04:02	87			697.0	
04:08:04	88		30	726.25	after shot 88 go
04:15:11	89		60	778.80	to 60# on 7 minute schedule.

DATE _____

DATE _____

ESP #

ESP #

TIME

~~SECRET~~

SHOT SIZE

RAYDIST

COMMENTS

04:22:10

90

60 lbs

829.5

04:29:05

9/

2)

878.6

04:36:05

92

22

931.1

04:43:02

93

✓

981.8

04:50:10

94

120 lbs

1033.7

CRUISE RC21-03

MCS LINE # 106

DATE

NOV. 16, 1977

[REDACTED]

C.O.P. 5 M

RECORDING LOG

shot

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
15:04:08	1	9 lbs	545.7	
15:08:04	2		546.8	
15:12:10	3		548.2	man ~ 7.6 h/sec
15:16:09	4		549.3	arrival! yes
15:20:07	5		550.5	missed on camera
15:24:05	6		24.9h 552.3	beauty! ~ 7.6!
15:28:20	7			missed on tape
15:32:08	8		25.0h 554.4	maybe
15:36:18	9		25.1h 556.6	fair!
15:40:04	10		25.2h 558.6	good
	11			missed on tape
48	12			missed on tape
15:52:04	13		565.5	good
15:56:04	14		568.5	?
16:00:04	15		570.10	grad.
16:04:04	16		571.50	"
16:08:04	17		574.0	"
16:08:06	18		576.20	

CRUISE

RC 21-03

MCS LINE # 106

DATE

Nov 16, 77

ESP #

COP 5M

RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
1616:08	19	9 lbs	26.1 ^h 578.3	poor to fair
1620:07	20	"	26.2 ^h 580.8	fair fair to good
1624:04	21	"	26.3 ^h 583.0	poor to invisible
1628:09	22	"	26.4 ^h 585.1	weak
1632:10	23	"	587.1	poor to invisible
1636:10	24	"	588.9	missed on tape
1640:10	25		590.66	got on tape
1644:05	26		590.5	
1648:08	27		588.5	
1652:07	28		585.1	
1656:	29			missed Fancy Trip
	30 31 didn't get			missed
17:08:04	32		574.7	
17:12:04	33		572.5	
17:16:04	34		570.3	
17:20:03	35		570.9	
17:24:09	36		572.1	missed shot on tape
17:28:04	37		572.5	

CRUISE 12C2103

MCS LINE # 105

DATE Nov. 14, 77

ESP # COP 52

RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
1732:03	38	9 lb	573.5	good to rigid
1736:03	39	"	574.1	
1740:04	40 41	"	575.8	good missed
1744:05	41 42	"	576.4	
1748:04	42	"	576.7	
1752:05	43	"	577.0	
1756:03	44	"	576.7	good
1800:00	45	"		missed
1804:03	46	"	577.0	good
1808:00	47	"	577.2	missed
1812:03	48	"	577.0	poor to fair
1816:03	49	"	576.3	
1820	50	"	576.3	poor to good
1824:08	51	"	576.5	
1828:03	52	"	576.3	poor
1832:03	53	"	576.3	
1836:05	54	"	576.0	poor

CRUISE RC2103

MCS LINE #106

DATE Nov. 16, 77

ESP # COP-5M

RECORDING LOG

TIME	^{Shot #} (SHOT #)	SHOT SIZE	RAYDIST	COMMENTS
1840:07	55	9 lbs	576.1	
~1844	56			missed
1848:07	57		575.7	
1852:06	58		575.9	missed
1856:03	59		576.3	good
1900:05	60		576.5	
1904:06	61		576.3	
1908:04	62		576.4	fair
1912:03	63		576.1	
1916:04	64		575.9	
1920:04	65		576.6	OK
1924:01	66		576.6	missed
1928:06	67		576.9	
1932:06	68		576.0	
1936:07	69		574.1	
1940:08	70		573.8	
1944:05	71		573.0	
1948:03	72		572.0	

CRUISE RC 2103

572.5

MCS LINE # 106

DATE Nov. 16, 77

(ESP) COP-54

RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
1952:05	73	9 lbs	571.7	
1956:03	74	"	571.4	good
2000:	75	"	570.5	missed
2004:15	76	"	570.2	
2008	77	"	570.4	poor
2012:06	78	"	570.3	
2014	79			?
2020	80			Missed.
2024	81		570.77	
2028	82		570.88	
2032	83		570.99	
2036	84			Missed.
2040	85		570.66	
2044	86		570.4	Missed.
2048	87		569.9	
2052			570.6	
2052	88		570.6	
2056	89		571.6	

CRUISE *21-03*MCS LINE # *106*

DATE

*NOV 16/77*ESP # *20P5*RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
<i>2100</i>	<i>90</i>	<i>9 lbs.</i>	<i>573.0</i>	
<i>2104</i>	<i>91</i>	<i>11</i>	<i>573.8</i>	
<i>2108</i>	<i>92</i>	<i>"</i>	<i>573.8</i>	
<i>2112</i>	<i>93</i>	<i>11</i>	<i>573.6</i>	
<i>2116</i>	<i>94</i>		<i>573.4</i>	
<i>2120</i>	<i>95</i>		<i>573.6</i>	
<i>2124</i>	<i>96</i>		<i>574.3</i>	
<i>2128</i>	<i>97</i>		<i>574.4</i>	
<i>2132</i>	<i>98</i>		<i>574.0</i>	
<i>2136</i>	<i>99</i>		<i>573.9</i>	
<i>2140</i>	<i>100</i>		<i>574.0</i>	
<i>2144</i>	<i>101</i>		<i>574.1</i>	
<i>2148</i>	<i>102</i>		<i>574.3</i>	<i>10 sec late</i>
<i>2152</i>	<i>103</i>		<i>573.9</i>	
<i>2156</i>	<i>104</i>		<i>573.9</i>	
<i>2100</i>	<i>105</i>		<i>574.8</i>	<i>✓</i>
<i>2104</i>	<i>106</i>		<i>574.6</i>	
<i>2108</i>	<i>107</i>		<i>574.8</i>	

CRUISE 21-03

MCS LINE # 106

DATE Nov 16/77

ESP # 00P5

RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
2212	108	9 lbs.	575.2	✓
2216	109		575.0	
2220	110		574.7	
2228	112		573.7	✓
2240	115		573.7	
2252	118		574.4	
2304	121		573.9	
2316	124		574.1	
2328	127		573.7	
2340	130		574.3	
2352	133		573.5	
0004	136		575.8	Nov 17/77
0016 1611	139		575.0	
0028	142		574.44	
0040	145		574.05	
0052	148		574.45	

1511 ~~0104.09~~ 573.77 last
Hana Wave shot for COP-5M

CRUISE

21-03

MCS LINE # 106

DATE _____

NOV 17
1977

ESP #

ESP # COP 5-M

RECORDING LOG

[illegible]

CRUISE RC21-03

MCS LINE # 107

DATE NOV. 17,
1977

ESP #

RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
0422		1 lb	50.1	NOT RECORDED
0423	12	2	52.9	
0424	12	3	56.4	
0425	10	4	61.4	
0427	09	6	70.6	
0428	11	7	76.1	
0429	06	8	81.0	
0430	13	9	87.1	
0431	09	10	92.5	
0432	14	11	98.7	
0433	03	12	103.5	
0434	07	13	109.7	
0435	04	14	115.5	
0436	01	15	122.1	
0437	03	16		
0438	10	17	134.2	
0439	07	18	140.1	
0440		19	14	

CRUISE 1202103

MCS LINE # 107

DATE 17 Nov. 77

ESP # 2

RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
04:41:24	20	1 lb	152.9	
04:42:18	21		159.4	
04:43:10	22		165.1	
04:44:12	23		171.5	
04:45:10	24		177.5	
04:46:17	25		185.0	
04:47:10	26		192.3	
04:48:13	27		197.5	
04:49:13	28		204.1	
04:50:15	29		210.8	
04:51:10	30		216.3	
04:52:15	31		224.1	
04:53:13	32		230.1	
04:54:10	33		236.1	
04:55:15	34		243.1	✓
04:56:08	35		249.2	copy
04:57:15	36		256.5	
04:58:10	37		262.2	

CRUISE RC2103

MCS LINE # 107

DATE 17 Nov. 77

ESP # 2

RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
0459:14	38	1 lb	268.9	✓ copy
0500:10	39		274.8	
0501:17	40		282.0	
0502:15	41		288.1	*
0503:13	42		294.6	✓ copy
0504:14	43		301.1	
0505:12	44		307.4	
0506:15	45		314.1	
0507:12	46		320.0	copy
0508:10	47		326.4	
0509:15	48		333.4	
0510:17	49		339.6	
0511:09	50		346.5	
0512:08	51		352.4	
0513:08	52		358.8	
0514:12	53		365.2	
0515:15	54		371.6	✓ copy examine
0516:15	55		378.2	

CRUISE *RC2103*MCS LINE # *107*DATE *17 Nov. 77*ESP # *2*RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
<i>0517:15</i>	<i>56</i>		<i>385.0</i>	
<i>0518:10</i>	<i>57</i>		<i>391.0</i>	<i>missed type drone jams</i>
<i>0524</i>	<i>62</i>		<i>431.2</i>	
<i>0525</i>	<i>64</i>		<i>438.2</i>	
<i>0527:19</i>	<i>66</i>		<i>450.2</i>	
<i>0528:10</i>	<i>67</i>		<i>455.5</i>	
<i>0529:08</i>	<i>68</i>	<i>3 lb</i>	<i>463.2</i>	
<i>0531:12</i>	<i>69</i>		<i>475.6</i>	
<i>0533:08</i>	<i>70</i>		<i>488.6</i>	
<i>0535:08</i>	<i>71</i>		<i>501.7</i>	
<i>0537:02</i>	<i>72</i>		<i>514.8</i>	
<i>0539:10</i>	<i>73</i>		<i>527.9</i>	
<i>0541:09</i>	<i>74</i>		<i>541.2</i>	
<i>0543:10</i>	<i>75</i>	<i>9 lb</i>	<i>554.4</i>	
<i>0547:14</i>	<i>76</i>		<i>581.0</i>	
<i>0551:17</i>	<i>77</i>		<i>607.4</i>	
<i>0555:22</i>	<i>78</i>	<i>30 lb</i>	<i>634.0</i>	
<i>0559:14</i>	<i>79</i>		<i>659.2</i>	

CRUISE KC2103

MCS LINE # 107

DATE 17 Nov. 77

ESP # 2

RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
0603:15	80	30 lbs	685.8	
0607	81			
0611	82	60 lbs	737.8	
0620:08	83		797	
0627	84	60 lbs		missed
0634:00	85	120 lbs	887.2	
0641	86			missed
0648:12	87		980.1	
0655:09	88	120 lbs	1026.6	
0702:15	89	"	1071.8	
0709:04	90	"	1111.59	
0716:10	91	"	1160.90	
0723:14	92	"	1207.40	
0730:06	93	"	1251.00	
0737	94	"	1296.00	
0744:10	95	"	1340.9	
0751:14	96	"	1386.0	
0757:10	97	"	1431.8	missed
0758:20				

CRUISE 2103

MCS LINE #

107

DATE

17 Nov. 77

ESP #

2

RECORDING LOG

TIME	SHOT #	^{Shot} #	SHOT SIZE	RAYDIST	COMMENTS
0805:10		98		1475.5	
0812:15		99		1521.1	
0819		100		1565.3	
0826		101		1612.00	last shot for ESP 2
<hr/>					
	ESP	# 3		18 NOV 77	
0058:05		4	1 lb	13.45	1st Good Start
0059:07		5	"	16.1	
0100:04		6	1 lb	20.8	
0101:05		7	"	26.5	
0106:10		12	1 lb	60.8	
01:10		16	"	88.5	
01:18		24	"	146.9	
		25	"		13 seconds early
01:25:05		27	"	168.35	
01:22:10		28	"	175.80	
01:26:08		32	"	204.75	
01:30:01		36	"	232.80	

CRUISE 21-03

MCS LINE # 109

DATE

NOV. 18, 1977

ESP # 3

RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
01:34:08	40	1lb.	262.4	
01:37:11	43	3lb.	284.2	
01:39:02	44	3lb.	297.9	
01:43:05	46	3lb.	327.7	
01:47:06	48	"	357.0	
01:51:06	50	"	385.1	
01:55:04	52	"	412.9	
01:59:06	54	"	441.1	
02:02:59	56	9lb	467.5	
02:07:00	57	9lb	494.5	
02:11:00	58	9lb	521.59	
02:15:00	59	9lb.	548.8	
02:19:03	60	"	575.7	
02:23:00	61	"	602.9	
02:27:06	62	"	630.8	
02:31:02	63	"	657.1	
02:35:01	64	"	677.7	
02:39:02	65	"	686.3	
02:43:00	66	"	687.6	Gyro problems - off course

CRUISE RC21-03

MCS LINE # 109 / 110

DATE

Nov. 18, 1977

ESP # 3

RECORDING LOG

TIME	SHOT #		SHOT SIZE	RAYDIST	COMMENTS
02:47	06	67	9 lb	687.0	
02:49					Superior shooting
06:32	02	70	9 lb	475.1	LINE #110 STARTS AGAIN
06:36	00	71	"	501.56	
06:40	08	72	"	529.22	
06:44	03	73	"	556.16	
06:47	58	74	"	582.29	
06:52	04	75	"	609.22	
06:56	01	76		636.2	
0700	00	77		663.0	
0704	03	78	9 lb	689.8	
0708	06	79	30 lbs	716.4	NO OSCILLOGRAPH
0712		80			
0716	02	82		769.5 785.33	John Ligger
0720	07	84	"	796.5	
0724			Mama vane didn't send lines		
0728	05	85		848.9	
0732	9	86		876.7	

CRUISE RC 2103

MCS LINE # 110

DATE Nov. 18, 77

ESP # 3

61
193 1069
270
540RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
0736	87	30 #	901.37	
0740	88	"	928.03	
0744:04	89	"	954.2	
075059	90	11.60	1000.1	
0758	92		1047.5	
0805:	94	11	1095.3	
08120271				
08120271	96	"	1141.98	
1912.98				
1912.98	98	11	1188.38	
082602.445	100	11	1239.1	
083359538	101	11	1285.3	
084000.026	103	11	1234.4	NO CAMERA Record.
0847.56.346	105		1376.1	
085401.082	107		1426.4	1069# 1011C
0901.59225	108	120 lbs	1472.3	
090801338	110	11	1518.1	
0915.07587	112	11	1566.4	
092201.128	113	11	1611.8	Last shot
END ESP # 3				

CRUISE

RC21-03

MCS LINE #111

DATE

NOV. 18, 1977

ESP # C.O.P. 6-3

RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
14:16:19	2	3lb.	281.6	not recorded
14:18:08	3	3 lb.	281.55	
14:20:05	4	"	285.15	
14:22:07	5	"	288.10	RAY DIST Pacer ER
14:24:05	6	"	291.5	LEADS 299.03
14:25:49	7	"	294.3	early arrival, bad trip tape tripped, no data
14:28:04	9	"	297.9	shot 8 followed soon - not recorded
14:30:05	10	"	301.2	
14:32:07	11	"	304.8	
14:34:04	12	"	308.1	
14:44:05	18	"	326.1	
14:52:05	23	"	340.95	shot 21 dnd
14:54:04	24	"	344.7	
14:56:05	25	"	348.55	
15:02:07	29	"	360.05	shot 30 false trip
15:08:04	34	"	372.1	
15:10:02	35	"	374.9	
15:12:06	36	"	374.85	
5:14:02	37	"	374.0	

CRUISE RC21-03

MCS LINE # 111

DATE

NOV. 18, 1977

ESP #

C.O.P 6-3

RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
15:26:06	43	3 lbs.	372.6	
15:28:02	44	"	372.35	good
15:36:08	48	"	371.4	on the way ship
15:38:05	49	"	371.0	
15:40:03	50	"	370.75	good 4.75 h/l
15:50:03	55	"	367.6	
16:00:02	60	"	366.1	good! fine well separated
16:08	64	"	366.2	good + shear
16 16 04	68		376.01	
16 24 04	72		363.35	
32	76		359.5	
16 40	80		354.08	a good 4.79 h/l
16 48 25	84		356.50	first lat
16 56 05	88		358.85	
17:04 05	92		360.00	very poor
17 12 05	96		362.00	
17:20 05	95	was actually	361.00	was No!
17:20 05	100		363.10	

Note: double transmission on shot 99

CRUISE

PC 21-03

MCS LINE # 111

DATE

11/18/77

03.852

ESP # Cop 6-3

RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
1718		3 rd		
1727	109		366.2	
1732	107		368.5	OK + good shear
1738			368.8	
1746	111		370.17	
1750	116		378.1	
1754	118		373.1	
1802	122		374.12	
1810 ⁰⁵	126		374.05	good
1818	130		374.42	
1826	134		375.00	
1834	137		375.20	- miss - shot 136
1836	138		375.00	wave delay send shot in chart.
1844 ⁶⁸	142		372.75	
1852	146		369.35	
1900	150		369.45	
1908	154		369.55	
1916	158		369.00	

CRUISE

RC 21-03

MCS LINE #

111

DATE

11/18/77

1

ESP # COB 6-3

RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
1924	162	3# 158	368.35	
1932	166		369.25	
1940	170		371.15	
1948	174		374.30	
1956	178		374.95	
2004	182		373.85	
2012	186		375.1	
2014	187		375.0	
2022	191		374.1	
2030	195	3 lbs.	374.1	
2038	199	"	374.0	
2046	203	"	373.9	
2054	207	"	373.4	
2104	211	"	374.0	
2112	215	"	373.4	
2120	219	"	374.0	
2128	223	"	373.8	
2136	227	"	373.4	

CRUISE RC 21-03

MCS LINE # 111

DATE Nov 18, 1977

(2)

~~ESP~~ # COP 6-3RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
2144	231	3 lbs.	373.5	
2152	235 234	11	374.2	
22 00	239	"	375.2	
22 08	243	"	374.5	
22 16	247	"	374.5	
22 22	250	"	373.1	
22 32	254	"	374.9	
22 38	257	"	374.5	
22 46	261	"	374.3	
22 54	265	"	374.4	
23 02	269	"	375.0	
23 10	273	"	375.6	
23 20	277	"	374.8	
23 28	281	"	374.3	
23 36	285	"	374.9	
23 44	289	"	375.4	
23 52	293	"	374.1	
24 00	297	"	372.7	

CRUISE RC 21-03

MCS LINE # 111

DATE NOV 19, 1977

~~ESP~~ # COP 6-3RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
00:08:06	302	3 lbs.	371.8	Good
00:16:04	306	3 lbs	371.9	"
00:24:07	310	"	371.9	"
00:32:05	314	"	371.55	Auxiliary made problem Shot not recorded
00:40:03	318	"	370.8	
00:48:03	322	"	370.6	very good
00:56:05	326	"	372.55	nice
01:04:07	330	"	374.04	not bad
01:12:05	334	"	375.65	O.K.
01:20:02	338	"	375.68	GOOD
01:28:02	342	"	375.75	GOOD
01:36:05	346	"	375.48	Good
01:40:03	348	"	375.5	
01:49:04	350	"	375.9	
01:52:06	354	"	376.22	O.K.
02:00:04	358	"	375.98	fair
02:08:04	362	"	375.45	
02:16:03	366	"	375.25	
02:24:03	370	"	375.95	

CRUISE

RC21-03

MCS LINE # 111

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ESP # COP 6-3

RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
02:32	02 374	3 lbs	376.58	
02:40	06 378	"	377.28	
02:48	05 382	"	376.41	fair
02:56	05 386	"	375.03	better
03:03	59 390	"		Bad trip
03:12	10 397	"	373.29	moored wave trouble with trip
03:19	52 404	"	372.7	Bad trip
03:36	412	"	373.95	
03:42	06 415	"	374.30	
03:50	03 419	"	374.55	GOOD
03:58	08 423	"	374.58	
04:06	03 427		373.51	
04:14	03 431		372.80	
04:22	05 435		371.20	
30	04 439		370.62	
38	02 443		370.75	missed shot 446 - accidently took out of Aux. work
46	447		370.45	
54	451		370.91	

CRUISE

MCS LINE # 111

DATE

C2103
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ESP # Cop 6-3

RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
0502	455	3#	370.85	
0510	459		371.18	missed shot 460
0518	463		370.48	don't know why
0526	467		371.10	
0534	471		370.70	
0542	475		370.90	
0550	479		371.10	
0558	483		370.72	
0606	487		370.75	
0614	491		370.80	
0622	495		370.78	
0630	499		370.45	
0638	503		370.15	
0646	507		370.00	
0654	511		370.00	
0702	515		370.60	
0710	519		370.15	
0718	523		370.00	

CRUISE

C 21 - 03

MCS LINE #

111

DATE

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ESP #

COP 6-3

RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
0726	527	3#	368.45	
0734	531		368.48	
0742	535		369.21	
0750	539		369.90	missed shot 538 -
0758	543		370.60	didn't trip
0806	547		371.0	
0814	551		371.	
0822	555		371.	
0832	560		370.4	
0840	564		370.4	SHOT 566 DELAY 9000
0848	568		372.6	
0856	572		374.5	
0904	576		376.4	
0912	580		378.4	
0920	584		380.6	
0930	588		387.7	
0946	598		388.7	
1012	611		395.2	
1020	616		398.7	

CRUISE RC21-03

MCS LINE # 111

DATE NOV 19/77

ESP #
COP 63RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
1048	629	3 lbs.	406.2	
1050	630	"	406.7	
1058	634	"	409.0	
1106	638	"	411.5	
1114	642	"	414.2	
1122	646	"	417.1	
1136	653	"	421.4	
1144	657	"	421.6	
1152	661	"	422.6	
1200	665	"	423.8	
1208	669	"	423.5	
1216	673	"	424.57	
1224	677	"	425.1	
12:32	681	"	426.1	
12:40	685	"	428.20	change aux delay to 5.0 sec for this shot only, to check record
12:48	689	"	429.03	for Moana White shot #690 aux. delay changed to 9.0 sec.
12:56	693	"	430.05	
13:00	696	3 lbs	430.55	

CRUISE RC21-03

MCS LINE # 111

DATE NOV. 19, 1977

ESP # COP 6-3

RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
13:02	697	9 lbs	430.54	
13:04	698	"	430.73	
13:06	699	"	431.64	
13:08	700	"	432.90	
13:12 12:12	701		435.5	
	702	3 lbs		
13:18	705	"	438.86	
13:22	707	"	441.26	
13:24	709	"	443.41	
13:30	711	"	445.62	
13:34	713	"	447.75	
13:38	715	"	449.39	
13:42	717	"	450.96	
13:46	719	"	452.39	
13:50	721	"	453.25	
13:54	723	3 lbs	453.93	
13:56	724	9 lbs	454.38	
14:00	725	9 lbs	455.29	
14:04	726	"	455.95	

CRUISE RC21-03

MCS LINE # 111

DATE NOV. 19

ESP #

COR 6-3

RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
14:08	727	9 lbs.	456.45	
14:12	728	9 lbs	456.97	
14:16	729	"	457.32	
14:20	730	"	457.58	
14:24	731	"	458.99	
14:28	732	"	458.6	
14:32	734	"	459.4	
14:36	735	"	459.98	
14:40	736	"	460.32	
14:44	737	"	461.04	
14:48	738	"	461.54	
14:52	739	"	462.05	
14:56	740	"	462.31	
15:00	741	"	462.23	
15:04	742	"	462.14	
15:08	743	"	462.43	
15:12	744	"	463.1	
15:16	745	"	463.85	
15:20	746	"	464.74	

CRUISE RC21-03

MCS LINE # 111

DATE NOV 19, 1977

ESP # COP 6-3

RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
15:24	747	9 lbs	465.83	
15:32	749	9 lbs	465.95	
15:36	750	"	466.03	
15:44	752	"	466.5	
15:52	754	"	467.90	
16:00	756	"	468.37	
16:08	758	"	468.33	
16:16	760	"	468.25	
16:24	762		468.03	camera put record out early - maybe we didn't record it
16:32	764		468.33	
16:40	766		468.70	
16:48	768		468.03	
16:56	770		468.35	
17:04	772		467	missed missed - the, fired too late and we thought was a dud.
17:08	774		468.29	
17:16	775 ^{yes, 775}		468.05	
17:24	777		467.45	
17:32	779		467.0	
17:40	781		468.0	

DATE _____

Re 21-03

MCS LINE # 111

NOV 19/77

~~ESP~~ #

cop 6-3

RECORDING LOG

TIME	SHOT #	SHOT SIZE	RAYDIST	COMMENTS
1748	783	9 lbs	467.9	
1756	785	"	468.35	
1804	787		468.20	
1812	789		467.67	
1820	791		468.85	
1828	793		468.18	
1836	795		469.15	
1844	797		469.00	
1852	799		469.00	
1900	801		469.60	
1908	803		469.80	
1916	805		470.15	
1924	807		470.00	
1928	809			last shot on line!!!