



#### Party 207

Line:

Contract: NorBraz-99

Non-Exclusive 2D Survey

Area: Foz do Amazonas and
Para-Maranhao Basins

Para-marannao Basin

1001-FA-226

**Direction:** 222,4 deg. **Date:** 09.10.00

# RECORDING EQUIPMENT SETUP AND PARAMETERS

#### RECORDING SYSTEM

Туре MSX I/O Number of channels 288 Adjacent Trace Sunning Yes Tape Type **IBM 3590** Format Type **SEG D 8048 IBM** Sample Rate 4 msec Rec length 12 sec Low cut filter 4 Hz / 18 db/oct Hight cut filter 103 Hz / 264 db/oct Monitor Type OYO GS-624 Plotter

#### DIGITAL STREAMER

Type MSX I/O
Sensitivity 14 V/Bar
Lengh 1 x 7200 m
Number of group 576
Group Spacing 12.5 m
Array Type Tapered, Center Weighted, 2 x 17.55 - m Overall length, 29% Overlap Adjacent Groups

#### **AUXILIARY CHANNELS**

NUMBER 1 Nearrfield phone N1 (near) Array 1
NUMBER 2 Nearrfield phone N2 (far) Array 1
NUMBER 3 Nearrfield phone N3 (near) Array 2
NUMBER 4 Nearrfield phone N4 (far) Array 2
NUMBER 5 Nearrfield phone N5 (near) Array 3
NUMBER 6 Nearrfield phone N6 (far) Array 3
NUMBER 7 Nearrfield phone N7 (near) Array 4
NUMBER 8 Nearrfield phone N8 (far) Array 4

WATER BREAK 1 1 - WB (near)
WATER BREAK 2 2 - WB across 200m
WATER BREAK 3 3 - WB across 400m
WATER BREAK 4 4 - WB across 600m

#### **NAVIGATION SYSTEM**

Positioning DGPS
Software SPECTRA System V7.6.6
Primary SKYFIX Inmarsat "MULTIFIX-2"
Secondary SKYFIX Spot Beam "MULTIFIX-2"
Gyro SPERRY Gyro Compass
Echosounder ODOM ECHOTRAC DF 3200

TAIL BUOY

Type SkyTrac
Tracking Range + Bearing
System GPS
2 Type ACTIVE TRANSPONDER

DEPTH CONTROL

 Type
 DigiCourse

 Model1
 5011E

 Model2
 5010

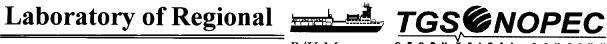
 Monitor
 239P

**ENERGY SOURCE** 

Type **BOLT Long-Life** GCS 90 Controller Tuning accuracy 0.1 msec Tuning tolerance < 1.0 msec Delay 70 msec Volume 6000 cu.in. Volume Tolerance 10% Pressure 2000 PSI Depth 6.0 m SP Interval 37.5 M.







### Geodynamics

CONTRACT: NorBraz-99

Party 207 R/V Mezen

Non-Exclusive 2D Survey

AREA:

Foz do Amazonas and Para-Maranhao Basins

#### I/O MSX SYSTEM OBSERVER LOG

#### **EXCEPTION ABBREVIATION LIST**

EXCEPTION ABBREVIATION LIST						
MNEMONIC	DESCRIPTION					
AF	Auto firing					
ANV	Average Noise Value					
BOL	Beginning of Line					
BOR	Beginning of Reel					
BYP	Tape is in Bypass Mode					
COR1	Corrected Errors on Primary Tape Unit					
COR2	Corrected Errors on Secondary Tape Unit					
DF#	Duplicate File Number					
DSP	Duplicate Shot Number					
ЕНТО	Energy Sourse System header is not received within time limit					
EOL	End of Line					
ETBK	Early Timebreak					
FA	Feather Angle					
FAILED	Recording Failed					
FCSP	First Chargeable Shot Point					
FGSP	First Good Shot Point					
Fireout suppressed	Fire Command is suppressed					
FSID	Field Shot Identifier					
FSP	First Shot Point					
GAPI	Gap Error on Primary Tape Unit					
GAP2	Gap Error on Secondary Tape Unit					
GT	Gun Timing					
ITB	Internal Timebreak					
LCSP	Last Chargeable Shot Point					
LGSP	Last Good Shot Point					
LSP	Last Shot Point					
LTBK MF	Late Timebreak Misfire					
MOL	Middle of Line					
MS						
NAV HDR TO	Missing sensor  Nav System header's is not received within time limit					
NAV IIDK 10 NF#	Non-sequental or Skipped File					
NFSID	Non-sequental FSID					
NSP	Non-sequental Shot Point					
PLAYBACK	Playedback File					
RETI	Primary Tape Unit Retries					
RET2	Secondary Tape Unit Retries					
SC	Short circuit					
SI	Seismic Interference					
SOL	Start of Line					
TBK suppressed	Timebreak is suppressed					
TELE ERR 1-16	Telemetry error count					
UHTO	Pre-built user header is not received within time limit					
	The bank ager header is not received within time mint					

### I/O MSX SYSTEM OBSERVER LOG

Tue Sep 12 03:25:03 2000

#### LINE INFORMATION

Client LARGE/TGS-NOPEC
Prospect NORBRAZ-99

Line Name | 1001-FA-226

Crew/Party 207
Operators LARGE

Weather FAIR
Seas state 3
Heading 222.4 deg.

Vessel M/V MEZEN

Job Name | N-EXCLUSIVE 2D SURV.

#### I/O MSX SYSTEM OBSERVER LOG

#### CLIENT: LARGE/TGS-NOPEC

PROSPECT: NORBRAZ-99

SHOT	FILE	REEL	TU	FSID	DATE & TIME	EXCEPTION	COMMENT
0	100	458	00	0000 00000	Sep 10, 2000 - 17:54:24	UHTO; NF#; DSP; NFSID; BOR; ITB;	Noise record ANV = 2.8 uB;
6602	101	458	00	0254 48492	Sep 10, 2000 - 18:23:18	NF#;	FSP,FGSP,FA = 27 deg. Stbd;
6290	413	458	00	0254 48804	Sep 10, 2000 - 20:52:48		FA = 30 deg. Stbd;
5921	782	458	00	0255 00001	Sep 11, 2000 - 00:00:06	NFSID;	Midnight SP #5922;
5538	1165	458	00	0255 00384	Sep 11, 2000 - 02:52:52		FA = 35 deg. Stbd;
5336	1367	458	00	0255 00586	Sep 11, 2000 - 04:28:20		Gun P2-2 GT = -3.3 ms;
5241	1462	458	00	0255 00681	Sep 11, 2000 - 05:15:44		FA = 40  deg. Stbd;
4995	1708	458	00	0255 00927	Sep 11, 2000 - 07:35:12		FA = 45  deg. Stbd;
4612	2091	458	00	0255 01310	Sep 11, 2000 - 10:55:52		FA = 40  deg. Stbd;
4551	2152	458	00	0255 01371	Sep 11, 2000 - 11:19:40		FA = 35 deg. Stbd;
4343	2360	458	00	0255 01579	Sep 11, 2000 - 12:38:56		FA = 30 deg. Stbd;
4103	2600	459	02	0255 01819	Sep 11, 2000 - 14:41:14	BOR;	
2750		459	02	0255 03172	Sep 11, 2000 - 23:19:52		FA = 30  deg. Stbd;
2644	4059	459	02	0256 00001	Sep 11, 2000 - 23:59:48	NFSID;	Midnight SP #2645;
2499	4204	459	02	0256 00146	Sep 12, 2000 - 00:54:28		FA = 30  deg. Stbd;
2074	4629	459	02	0256 00571	Sep 12, 2000 - 03:21:06	EOL;	LSP, LGSP, FA = 31.4 deg. Stbd;
0	4630	459	02	0000 00000	Sep 12, 2000 - 03:22:28	UHTO; NF#; DSP; NFSID; ITB;	Noise record, ANV = 2.4 uB;

### I/O MSX SYSTEM REEL LOG

Tue Sep 12 03:26:01 2000

#### LINE INFORMATION

Client LARGE/TGS-NOPEC NORBRAZ-99 Prospect Line Name 1001-FA-226 Crew/Party 207 Operators **LARGE** Weather **FAIR** Seas state 3 Heading 222.4 deg. Vessel M/V MEZEN

Job Name N-EXCLUSIVE 2D SURV.

#### CLIENT: LARGE/TGS-NOPEC PROSPECT: NORBRAZ-99

### I/O MSX SYSTEM REEL LOG

### Tue Sep 12 03:26:01 2000

REEL NUMBER	TAPE UNIT	FILE COUNT	FIRST FILE LAST FILE	FIRST SP LAST SP	FIRST FSID LAST FSID	START DATE & TIME END DATE & TIME
458	00	2500	100 2599	0 4104	0000 00000 0255 01818	Sep 10, 2000 - 17:54:24 Sep 11, 2000 - 14:40:40
459	02	2031	2600 4630	4103 0	0255 01819 0000 00000	Sep 11, 2000 - 14:41:14 Sep 12, 2000 - 03:22:28



### **Laboratory of Regional**





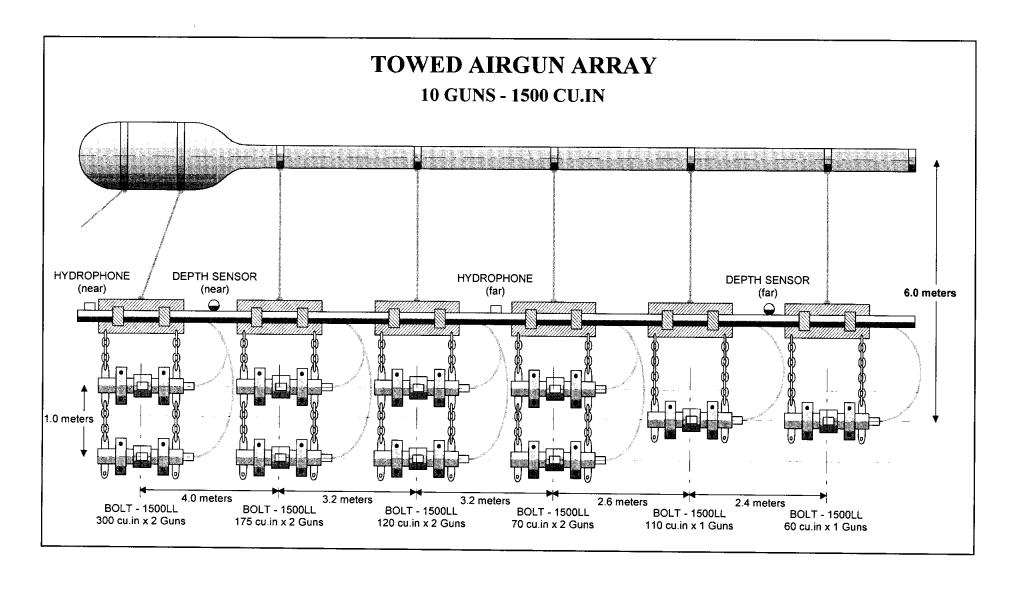
Geodynamics

CONTRACT: NorBraz-99

Party 207

Non-Exclusive 2D Survey

AREA: Foz do Amazonas and Para-Maranhao Basins





### **Laboratory of Regional**





Geodynamics

CONTRACT: NorBraz-99

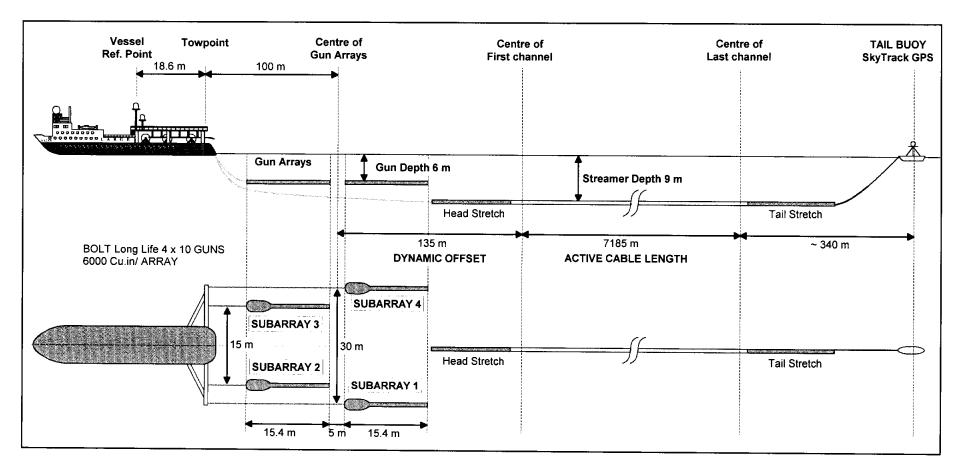
Party 207

Non-Exclusive 2D Survey

TGS ENOPEC

AREA: Foz do Amazonas and Para-Maranhao Basins

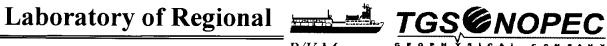
#### CABLE AND GUN ARRAY DIAGRAM





NorBraz-99





Geodynamics

Party 207 R/V Mezen

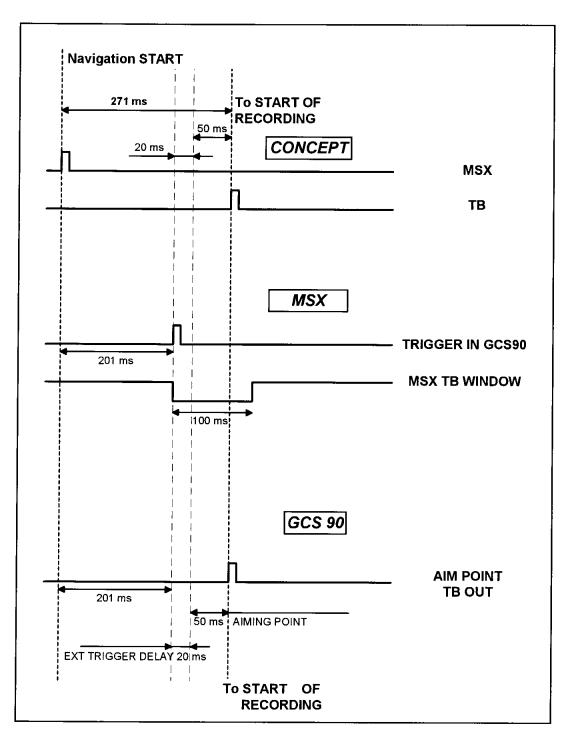
Non-Exclusive 2D Survey

AREA:

**CONTRACT:** 

Foz do Amazonas and Para-Maranhao Basins

### **SYSTEM TIMING**







### **Noise Summary**

Party 207

Contract: NorBraz-99

Non-Exclusive 2D Survey

Area: Foz do Amazonas and

Para-Maranhao Basins

Line:

1001-FA-226

Direction:

222,4 deg.

Date:

09.10.00

	SP No	Sea state	Ambient Noise
SOL	6602	2	2,8 ub
EOL	2074	2	2,4 ub

Swell	Swell Noise								
SP	Percent	ub							
6602	1	20							
4703	5	50							
4650	1	20							
4170	10	80							
4110	5	50							
3300	2	40							
2800	7	40							
2585	4	30							
2250	7	50							

Nature Noise								
SPFrom	SPTo	ChFrom	ChTo					
2788	2749	50	130					
2748	2709	47	113					
2708	2669	70	83					
2668	2629	97	118					
2628	2589	126	147					
2588	2586	155	170					

Project NorBraz-99

Project ID FA-PM

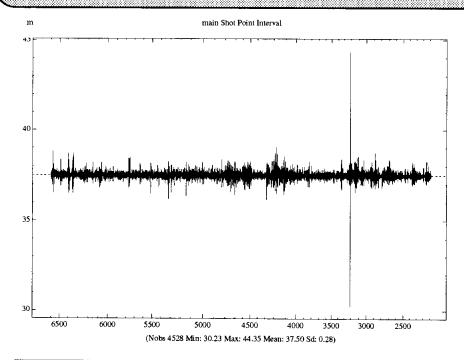
Client Non-Exclusive 2D Seismic Program

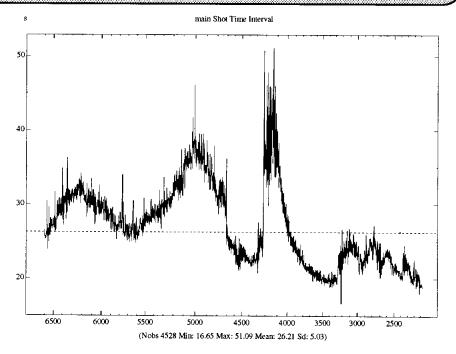
Line Name 1001-FA-226

File Number 000

First Shot 6602 Date 18:23:39 10 Sep 2000

Last Shot 2074 Date 03:21:28 12 Sep 2000





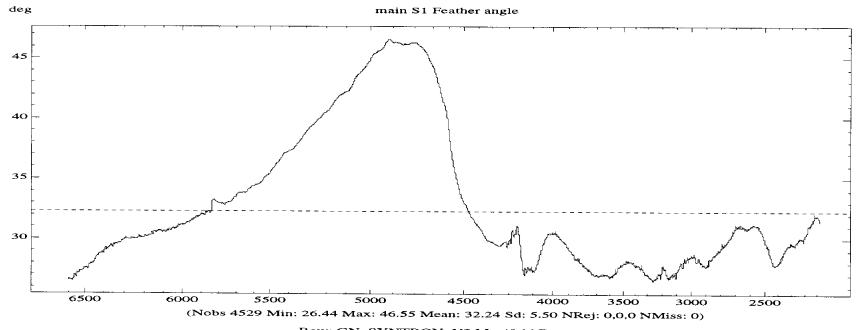
Id Rejection Threshold Description	Upper	Lower
		-

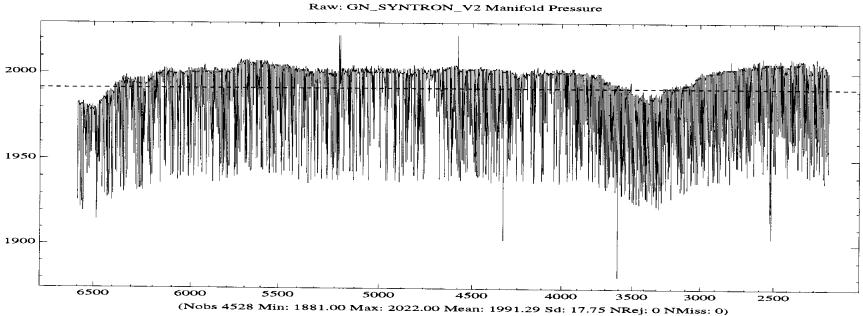
iii

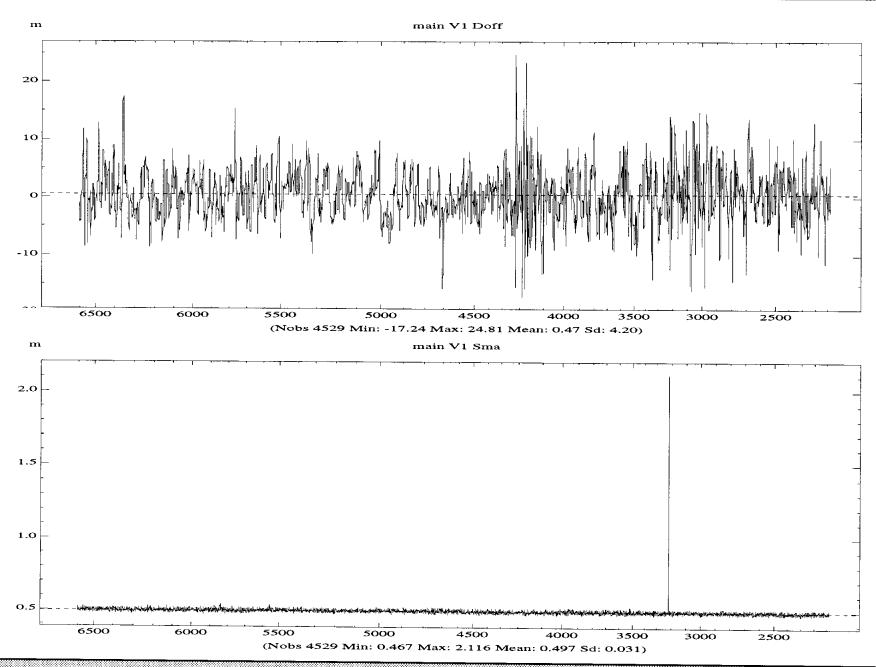
Network Name: main, Number of Missing Shots 0

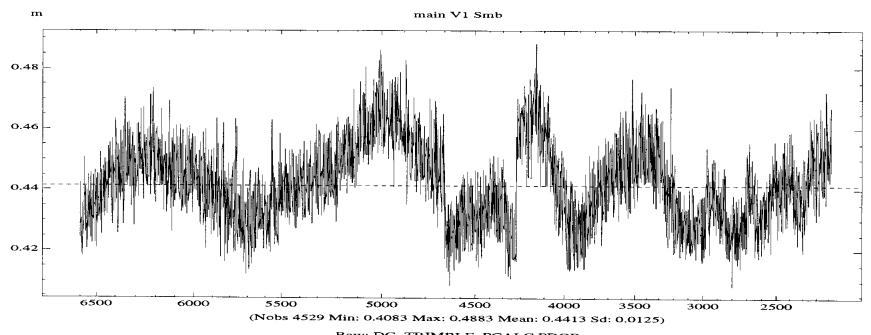
1001-FA-226

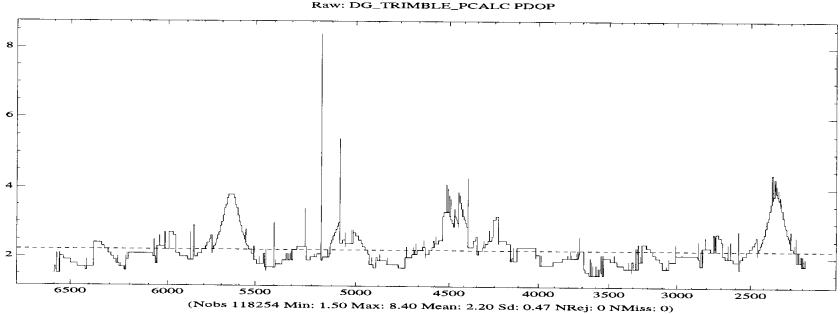
NorBraz-99



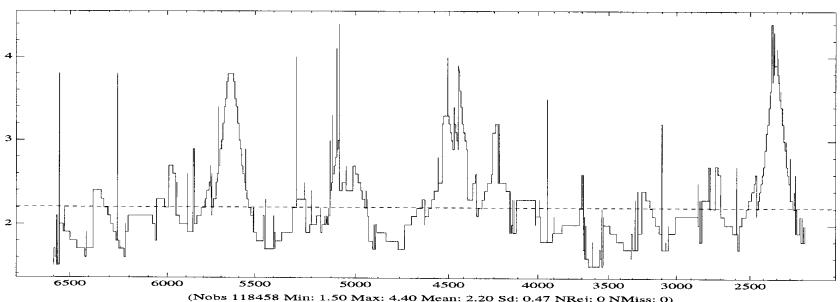




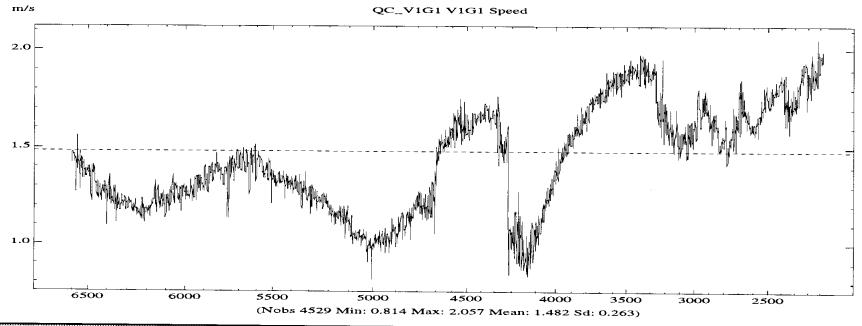


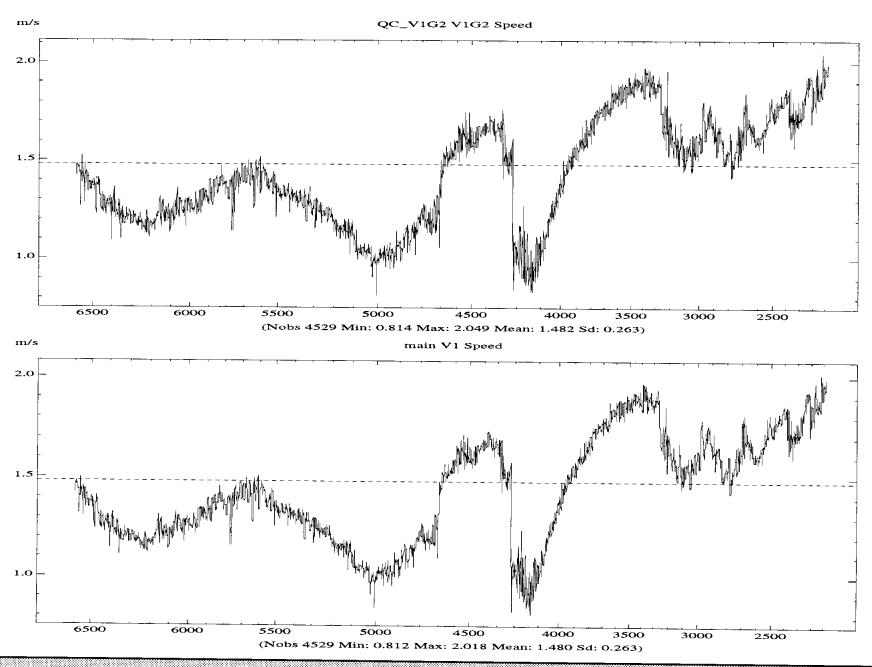


#### Raw: DG\_TRIMBLE\_PCALC#1 PDOP



(Nobs 118458 Min: 1.50 Max: 4.40 Mean: 2.20 Sd: 0.47 NRej: 0 NMiss: 0)

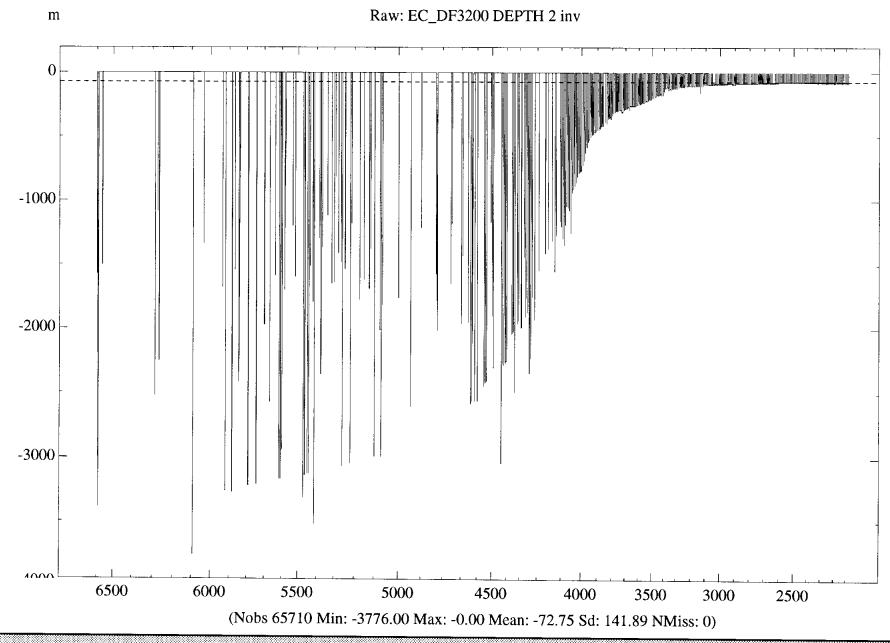




## Section 2

## Tue Sep 12 05:40:37 2000

Description	Min	Max	Mean	Sd	Nobs/Nrej/Nmiss
Raw: CM_DIGI_COMP_A #COMPASSES	13.000	13.000	13.000	0,000	4529 / 0,0,0,0 / 0
Raw: CM_DIGI_COMP_A S1C2	193.500	218.700	208.752	5.316	4529 / 0,0,0,0 / 0
Raw: CM_DIGI_COMP_A S1C4	193.600	216.400	208.820	5.254	4529 / 0,0,0,0 / 0
Raw: CM_DIGI_COMP_A S1C6	194.400	215.900	208.678	5.238	4529 / 0,0,0,0 / 0
Raw: CM_DIGI_COMP_A S1C8	195.000	215.900	209.124	5.235	4529 / 0,0,0,0 / 0
Raw: CM_DIGL_COMP_A S1C10	195.000	215.600	208.991	5.188	4529 / 0,0,0,0 / 0
Raw: CM_DIGI_COMP_A S1C12	195.200	217.500	210.153	5.718	4529 / 0,0,0,0 / 0
Raw: CM_DIGI_COMP_A S1C14	194.300	220,200	208.938	5.229	4529 / 0,0,0,0 / 0
Raw: CM_DIGI_COMP_A S1C16	194.900	217.600	209.026	5.242	4529 / 0,0,0,0 / 0
Raw: CM_DIGI_COMP_A S1C17	195.000	217.700	209.157	5.233	4529 / 0,0,0,0 / 0
Raw: CM_DIGI_COMP_A S1C18	194.900	218.600	209.171	5.308	4529 / 0,0,0,0 / 0
Raw: CM_DIGI_COMP_A S1C19	194.300	216.900	208.944	5.291	4529 / 0,0,0,0 / 0
Raw: CM_DIGI_COMP_A S1C20	193.800	221.800	209.232	5.488	4529 / 0,0,0,0 / 0
Raw: CM_DIGI_COMP_A S1C21	192.700	231.700	210.304	6.447	4529 / 0,0,0,0 / 0
Raw; CM_DIGI_COMP_A #Depths	21.000	21.000	21.000	0.000	4529 / 0,0,0,0 / 0
Raw: CM_DIGI_COMP_A S1D1	0.160	10.490	8.555	0.598	4529 / 0,0,0,0 / 0
Raw: CM_DIGI_COMP_A S1D2	6.450	10.340	8.938	0.365	4529 / 0,0,0,0 / 0
Raw: CM_DIGI_COMP_A S1D3	7.770	10.700	9.030	0.246	4529 / 0,0,0,0 / 0
Raw: CM_DIGI_COMP_A S1D4	8.100	10.040	9.034	0.176	4529 / 0,0,0,0 / 0
Raw: CM_DIGI_COMP_A S1D5	8.160	9.890	9.038	0.165	4529 / 0,0,0,0 / 0
Raw: CM_DIGI_COMP_A S1D6	8.280	9.920	9.038	0.156	4529 / 0,0,0,0 / 0
Raw: CM_DIGI_COMP_A S1D7	8.280	9.890	9.037	0.157	4529 / 0,0,0,0 / 0
Raw: CM_DIGI_COMP_A S1D8	7.980	10.580	9.037	0.157	4529 / 0,0,0,0 / 0
Raw: CM_DIGI_COMP_A S1D9	7.920	10.310	9.038	0.170	4529 / 0,0,0,0 / 0
Raw: CM_DIGI_COMP_A S1D10	8.010	10.940	9.036	0.181	4529 / 0,0,0,0 / 0
Raw: CM_DIGI_COMP_A S1D11	8.160	10.190	9.036	0.156	4529 / 0,0,0,0 / 0
Raw: CM_DIGI_COMP_A S1D12	8.310	9.950	9.021	0.158	4529 / 0,0,0,0 / 0
Raw: CM_DIGI_COMP_A S1D13	7.920	11.060	9.036	0.176	4529 / 0,0,0,0 / 0
Raw: CM_DIGI_COMP_A S1D14	7.920	10.760	9.041	0.189	4529 / 0,0,0,0 / 0
Raw: CM_DIGI_COMP_A S1D15	8.010	10.520	9.037	0.179	4529 / 0,0,0,0 / 0
Raw: CM_DIGI_COMP_A S1D16	8.040	10.130	9.004	0.195	4529 / 0,0,0,0 / 0
Raw: CM_DIGI_COMP_A S1D17	7.890	11.410	9.035	0.178	4529 / 0,0,0,0 / 0
Raw: CM_DIGI_COMP_A SID18	7.830	13.890	9.041	0.205	4529 / 0,0,0,0 / 0
Raw: CM_DIGI_COMP_A SID19	8.100	12.670	9.043	0.211	4529 / 0,0,0,0 / 0
Raw: CM_DIGI_COMP_A S1D20	7.140	13.540	9.041	0.238	4529 / 0,0,0,0 / 0
Raw: CM_DIGI_COMP_A S1D21	7.590	14.250	9.054	0.288	4529 / 0,0,0,0 / 0



Spectra Report Header Information 12/09/00 03:26:45 **Project Information** Name NorBraz-99 Non-Exclusive 2D Seismic Program Client Vessel Name MEZEN Survey Type/Location 2D Seismic/Foz do Amazonas&Para-Maranhao Basins Primary Nav System Secondary Nav System Navigation1 Navigation2 LARGE TGS-NOPEC Geophysical Contractor Line Information Line Name 1001-FA-226 Sequence No. 226 Direction 222.4 Date at SOL 10/09/2000 Linestatus Complete RP to Centre Source 118.6 Centre Source to Centre of 1st Group 135.0 Line Co-Ordinates Line Point Latitude Longitude 0 005 34'35.300"N 049 36'19.930"W 050 52'55.230"W 004 10'24.510"N KO'd Observations at SOL Nodes Observations Compasses Shot Information Time at FSP 18:23:39 Time at LSP 03:21:28 **FSP** 6602 LSP 2074 **FGSP** 6602 Time at FGSP 18:23:39 LGSP 2074 Time at LGSP 03:21:28 **General Comments** Line completed.

Page 1 of 2

**Auxiliary Systems** 

1001-FA-226-226

Spectra Report		Header Information	
Auxiliary System p1,p2 files	<i>Tape No.</i> 89		

12/09/00 03:26:45

1001-FA-226-226 Page 2 of 2

Spectra Report Shotlog Information 12/09/00 03:32:09

Spectra Report Shotlog Information 12/09/00 03:32:09

Line N	lame : 100 <sup>-</sup>	I-FA-226-226	6.000	First Shot : 6	602 La	st Shot :	2074		
Shot	Time	Date	DC	DA	BSP	HDG	CMG	DPT	FTH
6602	18:23:39	10/09/2000		0.1	2.8	190.8	221.9	0.0	26.5
6602	18:31:40	10/09/2000 L	JTC 18	:23 FSP,FGS	P Log sp	peed 4.6	knots.		
6594	18:27:06	10/09/2000	-4.2	300.0	2.9	193.1	222.1	3388.0	26.6
6590	18:28:48	10/09/2000	0.1	450.0	2.8	191.8	223.8	0.0	26.6
6587	18:30:05	10/09/2000	0.0	562.6	2.9	192.5	222.6	0.0	26.6
6582	18:32:15	10/09/2000	4.6	750.1	2.8	191.7	223.4	0.0	26.5
6580	18:33:07	10/09/2000	5.7	824.9	2.8	191.8	223.5	0.0	26.5
6570	18:37:35	10/09/2000	-0.4	1199.7	2.7	189.1	220.6	0.0	26.7
6560	18:41:55	10/09/2000	2.8	1575.1	2.8	192.3	222.3	0.0	27.0
6550	18:46:25	10/09/2000	-8.1	1950.1	2.7	192.6	219.3	0.0	27.2
6540	18:50:48	10/09/2000	-2.9	2325.0	2.8	192.1	223.6	0.0	27.2
6530	18:55:18	10/09/2000	-3.8	2699.9	2.7	192.1	224.2	0.0	27.4
6520	18:59:51	10/09/2000	1.3	3075.1	2.6	190.5	224.6	0.0	27.4
6510	19:04:25	10/09/2000	-2.5	3450.1	2.7	189.9	220.5	0.0	27.5
6500	19:08:56	10/09/2000	-0.6	3825.1	2.7	190.7	223.0	0.0	27.5
6500	19:13:49	10/09/2000 L	og sp	eed 4.6 knots	<b>3</b> .				
6490	19:13:31	10/09/2000	2.4	4200.2	2.6	190.3	222.6	0.0	27.6
6480	19:18:15	10/09/2000	3.4	4575.2	2.6	189.0	221.6	0.0	27.7
6470	19:22:46	10/09/2000	2.5	4949.8	2.7	190.3	225.1	0.0	27.9
6460	19:27:25	10/09/2000	6.9	5325.1	2.5	188.8	221.4	0.0	27.9
6450	19:32:15	10/09/2000	0.9	5700.0	2.6	191.2	223.4	0.0	28.3
6440	19:37:07	10/09/2000	3.6	6074.9	2.5	189.4	223.8	0.0	28.4
6430	19:42:01	10/09/2000	6.1	6449.9	2.4	188.4	223.7	0.0	28.6
6420	19:46:57	10/09/2000	-1.4	6825.0	2.5	189.3	222.7	0.0	28.7
6410	19:51:47	10/09/2000	0.6	7200.1	2.5	189.6	223.1	0.0	28.9
6400	19:56:48	10/09/2000	1.9	7575.4	2.3	188.2	219.2	0.0	28.9
6400	19:57:48	10/09/2000 L	og spe	eed 4.5 knots	s. ·				
6390	20:01:48	10/09/2000	-5.5	7950.4	2.5	191.1	221.8	0.0	29.2
6380	20:06:43	10/09/2000	5.8	8325.1	2.4	188.0	224.2	0.0	29.1
6370	20:11:49	10/09/2000	-1.5	8700.0	2.4	188.0	220.9	0.0	29.3
6360	20:16:52	10/09/2000	1.4	9075.5	2.4	192.2	224.0	0.0	29.4
6350	20:22:07	10/09/2000	5.8	9450.7	2.2	187.4	215.7	0.0	29.4
6340	20:27:16	10/09/2000	1.7	9825.0	2.3	186.6	221.1	0.0	29.5
6330	20:32:30	10/09/2000	-1.1	10200.1	2.3	187.0	221.8	0.0	29.6
6320	20:37:37	10/09/2000	-0.1	10575.0	2.4	187.8	224.0	0.0	29.6
6310	20:42:45	10/09/2000		10950.0	2.4	187.6	220.2	0.0	29.7
6300	20:47:55	10/09/2000	-2.4	11325.1	2.3	188.6	221.5	0.0	29.9
6300	20:53:01			ed 4.6 knots	١.				
6290	20:53:09	10/09/2000		11700.1	2.3	187.9	219.8	0.0	30.0
6280	20:58:18	10/09/2000		12075.0	2.4	188.8	221.7	0.0	30.0
6270	21:03:33	10/09/2000		12449.9	2.3	188.0	222.8	0.0	29.9
6260	21:08:48	10/09/2000		12825.0	2.3	188.2	222.7	0.0	30.1
6250	21:14:04	10/09/2000	2.7	13200.0	2.2	187.0	221.0	0.0	30.0
6240	21:19:25	10/09/2000	4.4	13574.9	2.3	186.0	220.8	0.0	30.0
6230	21:24:50	10/09/2000	-0.9	13950.1	2.3	187.0	220.3	0.0	30.1
6220	21:30:11	10/09/2000		14325.3	2.3	186.9	223.7	0.0	30.1
6210	21:35:36	10/09/2000		14699.8	2.3	187.8	221.4	0.0	30.1
6200	21:40:55	10/09/2000	-0.3	15075.0	2.3	186.3	220.9	0.0	30.1
6200	21:41:21	10/09/2000 L	og spe	ed 4.7 knots					

Shot	Time	Date	DC	DA	BSP	HDG	CMG	DPT	FTH
6190	21:46:14	10/09/2000	-0.8	15450.2	2.3	188.0	223.1	0.0	30.2
6180	21:51:32	10/09/2000		15825.1	2.3	188.5	222.3	0.0	30.2
6170	21:56:40	10/09/2000		16200.1	2.4	188.7	223.0	0.0	30.3
6160	22:01:41	10/09/2000		16574.9	2.5	192.4	225.4	0.0	30.6
6150	22:06:47	10/09/2000		16949.9	2.4	188.3	218.8	0.0	30.5
6140	22:11:44	10/09/2000		17325.1	2.4	188.7	224.4	0.0	30.5
6130	22:16:55	10/09/2000		17699.8	2.3	188.7	220.6	0.0	30.6
6120	22:21:59	10/09/2000		18075.2	2.3	188.0	221.3	0.0	30.6
6110	22:27:06	10/09/2000		18450.1	2.4	189.8	222.5	0.0	30.7
6100	22:32:16	10/09/2000		18825.1	2.4	187.5	222.8	0.0	30.6
6100	22:32:40			d 4.5 knots.		101.0	LLL.O	0.0	00.0
6090	22:37:23	10/09/2000		19200.6	2.3	187.9	218.0	0.0	30.6
6080	22:42:30	10/09/2000		19575.3	2.4	190.9	221.8	0.0	30.8
6070	22:47:27	10/09/2000		19949.6	2.6	190.2	225.0	0.0	30.8
6060	22:52:21	10/09/2000		20324.8	2.5	188.2	222.6	0.0	30.8
6050	22:57:10	10/09/2000		20700.1	2.5	188.0	222.2	0.0	30.9
6040	23:02:08	10/09/2000		21075.1	2.4	187.8	223.3	0.0	30.8
6030	23:07:12	10/09/2000		21450.2	2.4	187.1	220.9	0.0	31.0
6020	23:12:12	10/09/2000		21824.6	2.5	185.7	225.1	0.0	31.1
6010	23:17:06	10/09/2000		22200.1	2.5	186.5	221.8	0.0	31.1
6000	23:22:02	10/09/2000		22575.0	2.4	187.3	221.6	0.0	31.2
6000	23:22:26			d 4.5 knots.				0.0	V1.2
5990	23:26:59	10/09/2000		22950.2	2.4	187.0	221.0	0.0	31.2
5980	23:31:58	10/09/2000	1.5	23324.9	2.4	185.2	221.4	0.0	31.3
5970	23:36:50	10/09/2000	1.8	23700.0	2.5	187.0	222.9	0.0	31.4
5960	23:41:45	10/09/2000	3.2	24075.0	2.5	185.9	223.0	0.0	31.4
5950	23:46:38	10/09/2000	2.9	24449.9	2.6	188.1	224.8	0.0	31.6
5940	23:51:25	10/09/2000	-0.9	24824.8	2.6	186.0	223.8	0.0	31.6
5930	23:56:10	10/09/2000	-3.6	25200.0	2.6	186.3	222.0	0.0	31.7
5923	23:59:28	10/09/2000	-0.1	25462.4	2.6	186.0	223.8	0.0	31.7
5922	23:59:58	10/09/2000	-0.6	25500.1	2.5	186.4	222.3	0.0	31.7
5922	00:03:32	11/09/2000 U	TC 23:5	9:58 MSP L	oa speed	4.6 km	ots.		
5910	00:05:39	11/09/2000	3.6	25950.1	2.5	185.8	221.6	0.0	31.9
5900	00:10:28	11/09/2000	-6.8	26324.9	2.6	187.9	222.1	0.0	32.1
5900	00:18:14	11/09/2000 L	og spee	d 4.6 knots.					
5890	00:15:05	11/09/2000	1.4	26700.0	2.6	187.0	224.1	0.0	32.1
5880	00:19:49	11/09/2000	-0.0	27075.1	2.5	185.8	219.8	0.0	32.0
5870	00:24:29	11/09/2000	-1.9	27450.2	2.6	187.0	221.2	0.0	32.2
5860	00:29:01	11/09/2000	-4.2	27825.2	2.7	189.5	221.4	0.0	32.3
5850	00:33:37	11/09/2000	1.8	28199.9	2.6	187.2	223.1	0.0	32.2
5840	00:38:12	11/09/2000	-3.6	28575.1	2.7	188.0	221.8	0.0	32.8
5830	00:42:36	11/09/2000	-0.2	28949.9	2.8	188.8	225.2	0.0	33.3
5820	00:47:04	11/09/2000	1.9	29325.0	2.7	187.7	222.6	0.0	33.1
5810	00:51:36	11/09/2000	3.1	29700.1	2.6	185.7	221.0	0.0	33.0
5800	00:56:08	11/09/2000	4.1	30074.9	2.7	186.6	223.7	0.0	33.0
5800	00:56:42			d 4.4 knots.					
5790	01:00:47	11/09/2000		30450.2	2.5	184.2	221.1	0.0	32.9
5780	01:05:22	11/09/2000		30825.1	2.7	186.2	220.7	0.0	32.9
5770	01:09:58	11/09/2000	15.4	31200.3	2.4	177.8	225.4	0.0	32.9

1001-FA-226-226.000

Shot	Time	Date	DC	DA	BSP	HDG	CMG	DPT	FTH
5760	01:15:03	11/09/2000	-5.3	31575.1	2.7	187.9	224.3	0.0	32.9
5750	01:19:37	11/09/2000		31949.9	2.7	187.1	222.8		33.0
5740	01:23:58	11/09/2000		32325.0				0.0	
5730	01:28:28	11/09/2000		32700.0	2.8 2.7	187.0	223.9	0.0	33.0
5720	01:32:56	11/09/2000		33075.1	2.7	186.7 186.7	221.5	0.0	33.1
5710	01:37:14	11/09/2000		33450.2	2.8	186.8	222.1 223.2	0.0	33.3
5700	01:41:38	11/09/2000		33825.0	2.0	185.6	220.4	0.0	33.4
5700	01:42:10			d 4.4 knots.	2.1	100.0	220.4	0.0	33.6
5690	01:45:57	11/09/2000		34200.0	2.7	185.1	223.8	0.0	33.7
5680	01:50:20	11/09/2000		34575.0	2.8	186.3	223.6	0.0	
5670	01:54:38	11/09/2000		34950.1	2.6	185.1	221.2		33.8
5660	01:59:09	11/09/2000		35324.9	2.7	185.2	221.2	0.0	33.8 33.8
5650	02:03:30	11/09/2000		35700.2	2.7	185.2		0.0	
5640	02:08:04	11/09/2000		36075.4	2.7	183.1	220.8 217.0	0.0	33.8
5630	02:08:04	11/09/2000						0.0	33.9
5620	02:16:57	11/09/2000		36449.7 36825.1	2.9 2.7	185.6	225.7	0.0	34.1
5610	02:10:37					183.9	219.8	0.0	34.2
5600	02:21:20	11/09/2000 11/09/2000		37200.1 37575.0	2.8	187.5	222.6	0.0	34.3
5600	02:25:45			d 4.6 knots.	2.6	183.8	220.2	0.0	34.3
5590	02:30:06	11/09/2000		37950.0	2.8	186.8	223.4	0.0	34.4
5580	02:34:24	11/09/2000		38325.2	2.7	184.8	221.5	0.0	34.5
5570	02:38:46	11/09/2000		38700.3	2.8	185.5	221.3	0.0	34.5
5560	02:43:12	11/09/2000		39075.1	2.7	185.0	222.8	0.0	34.6
5550	02:47:47	11/09/2000		39450.2	2.6	182.6	219.5	0.0	34.7
5540	02:52:18	11/09/2000		39824.9	2.7	184.4	221.9		35.0
5530	02:56:49	11/09/2000		40200.3	2.6	183.4	221.5	0.0	35.2
5520	03:01:17	11/09/2000		40574.9	2.7	184.8	224.2	0.0	35.2
5510	03:05:57	11/09/2000		40949.8	2.6	183.3	219.8	0.0	35.3
5500	03:10:35	11/09/2000		41325.0	2.7	185.3	223.5	0.0	35.5
5500	03:10:50			d 4.4 knots.	2.1	100.0	223.3	0.0	35.5
5490	03:15:16	11/09/2000		41700.0	2.5	182.2	222.5	0.0	35.7
5480	03:20:01	11/09/2000		42075.1	2.6	183.8	222.5	0.0	35.9
5470	03:24:43	11/09/2000		42449.9	2.6	184.0	222.9	0.0	36.2
5460	03:29:23	11/09/2000		42825.1	2.6	183.0	220.4	0.0	36.3
5450	03:34:04	11/09/2000		43200.1	2.6	183.3	222.0	0.0	36.5
5440	03:38:42	11/09/2000		43575.2	2.6	184.7	223.6	0.0	36.7
5430	03:43:31	11/09/2000		43950.1	2.5	183.0	220.3	0.0	36.9
5420	03:48:11	11/09/2000		44325.2	2.5	181.7	221.4	0.0	37.1
5410	03:52:56	11/09/2000		44700.1	2.6	182.6	224.0	0.0	37.2
5400	03:57:44	11/09/2000		45075.2	2.5	182.3	221.9	0.0	37.3
5400	03:58:05			d 4.5 knots.	2.5	102.5	221.9	0.0	37.3
5390	04:02:31	11/09/2000		45450.1	2.5	181.9	221.7	0.0	37.3
5380	04:07:20	11/09/2000		45825.1	2.6	182.4	221.3	0.0	37.4
5370	04:12:06	11/09/2000		46200.1	2.5	182.4	223.8	0.0	37.5
5360	04:16:55	11/09/2000		46574.8	2.5	181.1	223.9	0.0	37.5
5350	04:21:43	11/09/2000		46949.9	2.5	182.2	222.6	0.0	37.9
5340	04:26:44	11/09/2000		47325.2	2.4	180.7	220.1	0.0	38.1
5330	04:31:35	11/09/2000		47700.2	2.5	181.0	223.3	0.0	38.3
5320	04:36:26	11/09/2000		48075.0	2.5	180.4	223.5	0.0	38.5
						. 50. 1		U.U	J.,

Shotlog Information

Spectra Report Shotlog Information 12/09/00 03:32:09

Shot	Time	Date	DC	DA	BSP	HDG	CMG	DPT	FTH
5040	04.44.00	44 (00 1000		10.150.1					
5310	04:41:28	11/09/2000		48450.1	2.4	180.2	222.7	0.0	38.8
5300	04:46:25	11/09/2000		48825.0	2.5	181.3	224.4	0.0	39.0
5300	04:46:40			d 4.4 knots.					
5290	04:51:27	11/09/2000		49200.2	2.4	179.3	221.8	0.0	39.2
5280	04:56:24	11/09/2000		49574.9	2.4	180.1	223.8	0.0	39.3
5270	05:01:25	11/09/2000		49950.1	2.4	180.7	221.1	1473.0	39.5
5260	05:06:25	11/09/2000		50324.9	2.5	180.1	223.5	0.0	39.6
5250	05:11:28	11/09/2000	4.1	50700.1	2.4	178.5	221.3	0.0	39.8
5240	05:16:35	11/09/2000	0.4	51075.1	2.4	178.4	219.8	0.0	40.0
5230	05:21:41	11/09/2000	-3.8	51450.1	2.3	179.5	221.2	0.0	40.1
5220	05:26:41	11/09/2000	-4.1	51825.0	2.4	180.2	221.7	0.0	40.3
5210	05:31:46	11/09/2000	-0.6	52200,2	2.4	179.6	223.3	0.0	40.4
5200	05:36:58	11/09/2000	4.0	52575.0	2.3	178.3	222.9	0.0	40.5
5200	05:38:45	11/09/2000 L	oa spee	d 4.5 knots.					
5190	05:42:16	11/09/2000		52949.9	2.3	178.0	222.5	0.0	40.7
5180	05:47:39	11/09/2000		53325.0	2.3	179.6	222.9	0.0	40.9
5170	05:53:06	11/09/2000		53700.0	2.2	178.3	220.4	0.0	41.1
5160	05:58:34	11/09/2000		54074.8	2.3	178.5	224.9	0.0	41.4
5150	06:04:00	11/09/2000		54450.0	2.3	178.6	223.2	0.0	41.6
5140	06:09:27	11/09/2000		54824.9	2.3	178.6	221.8	0.0	41.8
5130	06:14:52	11/09/2000		55200.0	2.2	177.7	223.0	0.0	41.9
5120	06:20:28	11/09/2000		55575.4	2.0	176.7	219.1	0.0	42.0
5110	06:25:54	11/09/2000		55949.8	2.3	179.6	224.3	0.0	42.0
5100	06:31:29	11/09/2000		56325.0	2.1	178.2	223.7	0.0	42.2
5100	06:31:44			ed 4.6 knots.		170.2	223.1	0.0	42.2
5090	06:37:20	11/09/2000		56700.2	2.0	176.9	220.5	0.0	42.3
5080	06:43:14	11/09/2000		57075.2	2.0	175.4	220.5	0.0	
5070	06:49:12	11/09/2000		57450.1	2.0	175.4	223.1		42.6
5060	06:55:12	11/09/2000		57825.3	2.0	174.5		0.0	43.1
5050	07:01:07	11/09/2000		58200.0			222.5	0.0	43.4
5040	07:07:13	11/09/2000			2.0	176.6	224.8	0.0	43.6
5030	07:07:13	11/09/2000		58575.0	2.0	176.9	222.4	0.0	43.8
5020	07:13:13	11/09/2000		58950.3	2.0	175.2	221.3	0.0	44.0
5010	07:19:28			59325.2	1.8	173.3	218.4	0.0	44.2
5000	07:25:50	11/09/2000		59700.2	1.9	174.5	222.3	0.0	44.6
5000 5000	07:32:24			60075.0	1.9	172.8	220.5	0.0	44.8
4990				d 4.6 knots.		474.0			
	07:38:39	11/09/2000		60450.0	2.0	174.9	223.4	0.0	45.3
4980	07:44:44	11/09/2000		60825.0	2.0	173.3	221.9	0.0	45.4
4970	07:50:49	11/09/2000		61200.1	2.1	175.3	224.9	0.0	45.5
4960	07:57:00	11/09/2000		61575.1	2.0	175.6	222.5	0.0	45.6
4950	08:03:04	11/09/2000		61950.1	2.0	175.7	221.9	0.0	45.8
4940	08:09:12	11/09/2000		62325.1	1.9	174.1	223.3	0.0	46.0
4930	08:15:17	11/09/2000		62700.2	1.9	173.2	223.2	0.0	46.3
4920	08:21:26	11/09/2000		63075.4	2.0	172.9	220.1	0.0	46.5
4910	08:27:14	11/09/2000		63449.9	2.1	175.1	222.6	0.0	46.5
4900	08:33:03	11/09/2000		63825.2	2.0	171.9	221.5	0.0	46.3
4900	08:33:17			d 4.5 knots.					
4890	08:39:07	11/09/2000		64200.0	2.0	173.5	220.1	0.0	46.3
4880	08:44:49	11/09/2000	-2.6	64575.0	2.1	173.5	220.4	0.0	46.3

1001-FA-226-226.000

Spectra Report

12/09/00 03:32:09

Shot	Time	Data	DC	04	BSP	UDC	CMC	OOT	<del></del>
Shot	Time	Date	DC	DA	вор	HDG	CMG	DPT	FTH
4870	08:50:17	11/09/2000	5.7	64949.9	2.2	172.7	224.0	0.0	46.2
4860	08:55:57	11/09/2000		65325.1	2.1	171.5	221.2	0.0	46.2
4850	09:01:42	11/09/2000		65700.1	2.2	173.8	221.0	0.0	46.2
4840	09:07:11	11/09/2000		66075.2	2.2	173.0	223.0	0.0	46.2
4830	09:12:49	11/09/2000		66450.0	2.2	173.6	220.8	0.0	46.1
4820	09:18:14	11/09/2000		66824.7	2.3	176.1	223.9	0.0	46.2
4810	09:23:30	11/09/2000		67200.0	2.3	175.2	222.8	0.0	46.3
4800	09:28:41	11/09/2000	-1.1	67574.7	2.4	176.5	225.1	0.0	46.3
4800	09:28:53	11/09/2000 L	og spee	d 4.8 knots.					
4790	09:33:48	11/09/2000	-3.1	67949.9	2.4	177.4	222.8	0.0	46.3
4780	09:38:55	11/09/2000	1.3	68325.2	2.3	176.9	222.5	0.0	46.2
4770	09:44:13	11/09/2000	0.6	68700.0	2.2	174.1	220.2	0.0	46.0
4760	09:49:27	11/09/2000	-3.2	69075.5	2.3	178.0	220.9	0.0	45.9
4750	09:54:42	11/09/2000	-2.8	69450.3	2.3	175.1	221.9	0.0	45.7
4740	09:59:59	11/09/2000	-2.5	69825.5	2.3	178.0	221.2	0.0	45.5
4730	10:05:03	11/09/2000		70200.0	2.3	175.7	223.6	0.0	45.1
4720	10:10:11	11/09/2000	-5.4	70574.9	2.6	178.5	223.6	0.0	44.8
4710	10:15:08	11/09/2000		70949.9	2.4	177.4	222.5	0.0	44.5
4700	10:19:55	11/09/2000		71325.3	2.7	188.0	224.3	0.0	44.3
4700	10:20:14			d 4.5 knots.					
4690	10:24:15	11/09/2000		71700.0	2.8	186.9	222.7	0.0	43.8
4680	10:28:28	11/09/2000		72075.3	2.9	188.0	222.9	0.0	43.4
4670	10:32:37	11/09/2000		72450.0	3.0	188.5	223.5	0.0	42.9
4660	10:36:43	11/09/2000		72825.3	2.9	187.4	220.6	0.0	42.4
4650	10:40:50	11/09/2000		73199.9	3.0	187.3	222.4	0.0	41.9
4640	10:44:53	11/09/2000		73575.0	3.0	187.5	222.5	0.0	41.5
4630	10:48:59	11/09/2000		73950.1	3.0	186.5	222.1	0.0	41.1
4620	10:53:03	11/09/2000		74325.1	2.9	189.1	222.1	0.0	40.6
4610 4600	10:57:03 11:01:02	11/09/2000		74700.1	3.0	188.5	222.4	0.0	39.8
4600	11:02:23	11/09/2000 11/09/2000 Lo		75075.1	3.1	189.2	222.0	0.0	38.7
4590	11:05:01	11/09/2000		d 4.6 knots.	0.1	100.0	000.0	0.0	07.7
4580	11:08:55	11/09/2000		75450.2 75824.7	3.1 3.2	189.8	220.3	0.0	37.7
4570	11:12:48		1.0	76199.8	3.1	191.1	224.9	0.0	36.8
4560	11:16:38		1.0	76575.1	3.1	187.9 189.2	221.3	0.0	36.1
4550	11:20:26	11/09/2000		76950.2	3.2	189.2	222.4	0.0	35.6
4540	11:24:15	11/09/2000		77325.3	3.2	191.2	222.5 222.9	0.0	35.0
4530	11:28:07	11/09/2000		77700.4	3.1	187.2	222.9	0.0	34.6 34.1
4520	11:32:01	11/09/2000		78074.9	3.2	192.3	224.4	0.0	33.7
4510	11:35:54	11/09/2000		78450.1	3.1	187.9	221.3	0.0	33.4
4500	11:39:45	11/09/2000		78825.0	3.2	190.1	223.0	0.0	33.1
4500	11:39:59			d 4.6 knots.	0.2	150.1	220.0	0.0	33.1
4490	11:43:40	11/09/2000		79199.9	3.1	190.3	222.1	2300.0	32.9
4480	11:47:37	11/09/2000		79575.1	3.0	189.8	221.6	0.0	32.7
4470	11:51:30	11/09/2000		79949.9	3.1	189.3	223.2	0.0	32.4
4460	11:55:22	11/09/2000		80324.8	3.2	189.3	224.7	0.0	32.2
4450	11:59:16	11/09/2000		80700.0	3.2	192.0	223.6	0.0	31.9
4440	12:03:03	11/09/2000	1.2	81075.2	3.2	189.7	222.6	0.0	31.8
4430	12:06:52	11/09/2000	-1.2	81450.0	3.2	191.7	223.2	0.0	31.6

Shotlog Information

Spectra Report Shotlog Information 12/09/00 03:32:09

Shot	Time	Date	DC	DA	BSP	HDG	CMG	DPT	FTH
4420	12:10:38	11/09/2000	-0.1	81825.0	3.2	190.8	222.1	0.0	31.3
4410	12:14:23	11/09/2000		82200.1	3.3	190.4	222.7	0.0	31.2
4400	12:18:09	11/09/2000		82574.9	3.3	189.3	222.7	0.0	31.1
4400	12:18:27			d 4.6 knots.		103,0	222.1	0.0	01.1
4390	12:21:52	11/09/2000		82949.9	3.2	188.7	222.4	0.0	30.9
4380	12:25:37	11/09/2000		83325.0	3.3	190.5	222.4	0.0	30.8
4370	12:29:16	11/09/2000		83700.1	3.2	187.7	220.5	0.0	30.6
4360	12:32:57	11/09/2000		84075.1	3.3	189.9	221.7	0.0	30.4
4350	12:36:39	11/09/2000		84450.0	3.3	189.7	222.7	0.0	30.2
4340	12:40:25	11/09/2000		84825.0	3.3	192.1	224.2	0.0	30.0
4330	12:44:13	11/09/2000		85200.1	3.2	189.1	220.9	0.0	29.8
4320	12:47:59	11/09/2000		85575.0	3.2	189.9	221.7	0.0	29.8
4310	12:51:43	11/09/2000		85950.1	3.2	189.9	222.2	0.0	29.8
4300	12:55:30	11/09/2000		86325.1	3.2	188.0	221.1	0.0	29.8
4300	12:55:45			d 4.6 knots.		100.0	221.1	0.0	25.0
4290	12:59:17	11/09/2000		86700.0	3.3	190.4	226.1	0.0	29.7
4280	13:03:16	11/09/2000		87074.6	3.0	185.4	227.3	0.0	29.5
4270	13:07:18	11/09/2000		87449.5	3.1	190.7	226.6	0.0	29.5
4260	13:11:26	11/09/2000		87825.3	2.9	189.6	221.8	0.0	29.5
4250	13:15:36	11/09/2000		88199.9	2.9	190.2	222.8	0.0	29.4
4240	13:19:46	11/09/2000		88575.0	3.0	190.8	223.4	0.0	29.4
4230	13:23:57	11/09/2000		88949.9	2.9	191.1	224.0	0.0	29.7
4220	13:28:09	11/09/2000		89324.5	2.8	188.6	226.5	0.0	29.7
4210	13:34:15	11/09/2000		89700.0	2.0	199.1	220.3	0.0	29.4
4200	13:40:18	11/09/2000		90074.9	2.0	197.2	218.2	0.0	29.4
4200	13:40:48			d 4.6 knots.		131.2	210.2	0.0	29.1
4190	13:46:20	11/09/2000		90449.8	2.1	195.9	227.0	0.0	29.7
4180	13:52:27	11/09/2000		90825.6	1.9	194.8	209.1	0.0	30.2
4170	13:58:19	11/09/2000		91200.0	2.1	192.2	222.9	0.0	30.5
4160	14:04:37	11/09/2000		91575.0	2.1	196.7	226.5	0.0	30.6
4150	14:11:04	11/09/2000		91949.7	1.9	192.7	228.4	0.0	29.1
4140	14:18:00	11/09/2000		92325.3	1.7	195.7	215.4	0.0	27.5
4130	14:24:48	11/09/2000		92700.3	1.7	196.5	223.5	0.0	27.6
4120	14:31:15	11/09/2000		93074.5	1.9	194.3	225.0	0.0	27.7
4110	14:37:22	11/09/2000		93450.4	1.8	193.7	212.9	0.0	27.4
4100	14:43:27	11/09/2000		93825.0	2.0	197.3	230.7	1201.0	27.5
4100	14:43:37			d 4.3 knots.		137.5	250.1	1201.0	27.5
4090	14:49:27	11/09/2000		94199.9	2.0	193.7	222.4	0.0	27.5
4080	14:55:14	11/09/2000		94575.2	2.1	195.2	221.8	0.0	27.9
4070	15:00:48	11/09/2000		94950.0	2.2	194.8	223.3	0.0	28.5
4060	15:06:07	11/09/2000		95324.8	2.3	193.5	223.1	0.0	29.1
4050	15:11:15	11/09/2000		95699.7	2.5	196.6	228.6	0.0	29.6
4040	15:16:14	11/09/2000		96075.2	2.4	197.5	219.4	0.0	30.0
4030	15:21:11	11/09/2000		96449.8	2.5	195.2	225.3	0.0	30.3
4020	15:26:01	11/09/2000		96824.9	2.6	195.8	224.1	0.0	30.5
4010	15:30:45	11/09/2000		97200.0	2.6	195.5	222.4	0.0	30.5
4000	15:35:19	11/09/2000		97575.2	2.6	195.1	221.1	747.0	30.5
4000	15:35:46			d 4.6 knots.		700.1	m 6. 1 . 1	777.0	JU.4
3990	15:39:52	11/09/2000		97950.1	2.7	197.2	220.7	701.0	30.5
							,		55,5

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Spectra Report

12/09/00 03:32:09

Spectra Report	Shotlog Information	12/09/00 03:32:09
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Shot	Time	Date	DC	DA	BSP	HDG	CMG	DPT	FTH
3980	15:44:22	11/09/2000	2.5	98325.4	2.7	196.6	220.3	0.0	30.4
3970	15:48:44	11/09/2000		98699.9	2.8	196.5	222.8	575.0	30.3
3960	15:53:01	11/09/2000		99074.9	2.9	197.3	223.8	0.0	30.2
3950	15:57:17	11/09/2000		99450.2	2.9	197.9	221.6	513.0	30.1
3940	16:01:27	11/09/2000		99825.0	2.9	197.2	221.9	494.0	29.9
3930	16:05:37	11/09/2000		100200.1	2.9	197.0	221.4	0.0	29.7
3920	16:09:44	11/09/2000		100575.0	3.0	197.8	223.6	0.0	29.6
3910	16:13:45	11/09/2000		100950.0	3.0	195.2	223.5	0.0	29.3
3900	16:17:49	11/09/2000		101324.9	3.1	195.0	224.4	441.0	29.2
3900	16:18:16	11/09/2000 L	oa spee	d 4.5 knots.					~~
3890	16:21:55	11/09/2000		101699.9	2.9	197.0	220.8	435.0	29.0
3880	16:25:54	11/09/2000		102074.9	3.1	197.5	223.3	424.0	28.9
3870	16:29:49	11/09/2000		102450.2	3.1	197.0	223.2	0.0	28.7
3860	16:33:43	11/09/2000	7.9	102825.0	3.1	194.3	223.2	0.0	28.3
3850	16:37:39	11/09/2000		103200.4	3.1	199.3	221.2	0.0	28.4
3840	16:41:33	11/09/2000		103575.1	3.1	201.3	222.2	375.0	28.5
3830	16:45:22	11/09/2000	-4.9	103949.8	3.2	198.8	223.0	0.0	28.4
3820	16:49:08	11/09/2000	4.6	104325.1	3.2	197.3	222.2	355.0	28.1
3810	16:52:56	11/09/2000	4.8	104700.1	3.2	196.2	221.9	0.0	28.0
3800	16:56:44	11/09/2000	3.1	105074.9	3.2	195.9	221.3	0.0	27.9
3800	16:57:40			d 4.7 knots.					
3790	17:00:26	11/09/2000		105450.2	3.3	196.5	220.6	0.0	27.7
3780	17:04:10	11/09/2000	-4.7	105824.9	3.3	197.4	222.8	311.0	27.7
3770	17:07:46	11/09/2000	-4.9	106200.1	3.4	198.7	222.9	303.0	27.6
3760	17:11:23	11/09/2000		106575.1	3.3	199.2	220.6	0.0	27.5
3750	17:15:01	11/09/2000		106950.1	3.3	199.2	222.3	292.0	27.3
3740	17:18:35	11/09/2000	2.6	107325.1	3.4	197.5	224.0	295.0	27.2
3730	17:22:08	11/09/2000	-0.8	107700.1	3.4	197.1	221.8	0.0	27.1
3720	17:25:42	11/09/2000	-1.9	108074.8	3.4	198.9	224.5	0.0	27.1
3710	17:29:16	11/09/2000	-4.9	108450.4	3.4	198.1	220.4	285.0	27.0
3700	17:32:49	11/09/2000	-6.4	108825.1	3.4	199.9	221.2	0.0	27.1
3700	17:33:35	11/09/2000 L	og spee	d 4.5 knots.					
3690	17:36:22	11/09/2000	-1.2	109200.3	3.4	197.9	220.5	270.0	27.0
3680	17:39:51	11/09/2000	0.1	109574.9	3.5	197.4	222.4	269.0	27.0
3670	17:43:25	11/09/2000	-2.1	109950.1	3.4	198.1	221.8	266.0	27.0
3660	17:46:57	11/09/2000	-0.3	110325.1	3.5	198.3	224.0	0.0	27.0
3650	17:50:25	11/09/2000	1.5	110700.0	3.6	198.9	225.5	0.0	27.0
3640	17:53:53	11/09/2000	-0.6	111075.3	3.5	199.1	220.7	0.0	27.1
3630	17:57:19	11/09/2000	0.9	111450.1	3.5	198.2	221.7	0.0	27.1
3620	18:00:44	11/09/2000	4.0	111825.2	3.5	197.6	222.6	256.0	27.0
3610	18:04:10	11/09/2000	3.2	112200.1	3.5	200.4	223.3	0.0	27.0
3600	18:07:36	11/09/2000	0.4	112575.1	3.5	198.9	220.3	251.0	27.0
3600	18:09:03	11/09/2000 Lo	og spee	d 4.2 knots.					
3590	18:10:59	11/09/2000	2.5	112950.1	3.5	197.0	220.6	246.0	26.9
3580	18:14:23	11/09/2000	4.8	113325.2	3.5	196.3	220.3	0.0	26.9
3570	18:17:49	11/09/2000	3.1	113699.8	3.6	198.5	225.3	237.0	27.2
3560	18:21:11	11/09/2000	3.0	114075.0	3.6	198.7	223.1	0.0	27.5
3550	18:24:34	11/09/2000		114450.2	3.5	195.6	219.6	0.0	27.2
3540	18:27:58	11/09/2000	-0.9	114825.1	3.5	196.8	220.2	223.0	27.5
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Spectra Report Shotlog Information 12/09/00 03:32:09

Shot	Tim-	Data	00		000	(100	2112	0.07	~~.
Shot	Time	Date	DC	DA	BSP	HDG	CMG	DPT	FTH
3530	18:31:21	11/09/2000	0.7	115200.3	3.6	198.1	222.0	0.0	27.6
3520	18:34:44	11/09/2000		115575.3	3.6	199.4	220.3	213.0	28.0
3510	18:38:02	11/09/2000		115950.1	3.7	199.0	222.5	0.0	27.8
3500	18:41:23	11/09/2000		116325.0	3.6	199.4	222.2	0.0	28.0
3500	18:42:43			d 4.6 knots.		199.4	222.2	0.0	20.0
3490	18:44:44	11/09/2000		116700.0	3.7	199.9	222.5	198.0	28.1
3480	18:48:03	11/09/2000		117075.1	3.6	198.2	220.4	192.0	28.0
3470	18:51:23	11/09/2000		117450.0	3.7	203.1	222.8	188.0	28.2
3460	18:54:40	11/09/2000		117825.0	3.7	201.0	223.9	0.0	28.2
3450	18:57:58	11/09/2000		118200.0	3.7	201.5	223.8	177.0	28.2
3440	19:01:16	11/09/2000		118575.2	3.7	200.5	222.5	0.0	28.2
3430	19:04:32	11/09/2000		118950.1	3.7	199.5	223.6	0.0	28.1
3420	19:07:50	11/09/2000		119325.0	3.6	198.9	220.6	0.0	28.0
3410	19:11:08	11/09/2000		119700.1	3.7	201.1	224.4	0.0	28.0
3400	19:14:29	11/09/2000		120074.9	3.7	200.8	224.4	0.0	27.9
3400	19:48:05			d 4.5 knots.		200.0		0.0	27.0
3390	19:17:50	11/09/2000		120449.9	3.7	199.2	222.7	117.0	27.9
3380	19:21:05	11/09/2000	0.6	120825.0	3.7	197.8	221.1	0.0	27.8
3370	19:24:19	11/09/2000	7.4	121199.9	3.8	198.4	224.5	119.0	27.7
3360	19:27:34	11/09/2000	5.3	121574.9	3.7	194.0	221.0	130.0	27.4
3350	19:30:58	11/09/2000	-13.0	121950.3	3.6	205.4	222.4	0.0	27.9
3340	19:34:15	11/09/2000	-1.4	122325.1	3.7	201.0	222.9	125.0	27.6
3330	19:37:32	11/09/2000	5.0	122700.0	3.7	198.9	224.2	126.0	27.3
3320	19:40:51	11/09/2000	4.3	123075.3	3.6	197.7	221.8	0.0	27.1
3310	19:44:11	11/09/2000		123450.2	3.6	198.7	221.0	121.0	27.1
3300	19:47:34	11/09/2000		123825.0	3.6	199.5	221.9	122.0	27.0
3300	19:48:41			d 4.4 knots.				124.0	27.0
3290	19:50:52	11/09/2000		124200.0	3.7	199.4	223.1	0.0	26.9
3280	19:54:11	11/09/2000	-3.2	124575.1	3.7	200.5	222.9	0.0	26.8
3270	19:57:27	11/09/2000	-2.1	124950.2	3.7	201.9	222.2	112.0	26.8
3260	20:00:51	11/09/2000	6.9	125324.7	3.5	199.1	225.3	0.0	26.6
3250	20:04:30	11/09/2000	2.2	125700.1	3.3	201.3	223.0	0.0	26.7
3240	20:08:13	11/09/2000	2.6	126074.7	3.3	199.7	224.4	0.0	26.8
3230	20:11:54	11/09/2000	6.1	126449.5	3.4	199.1	226.6	0.0	26.9
3220	20:15:40	11/09/2000	-3.3	126824.8	3.4	200.4	223.0	107.0	27.2
3210	20:19:17	11/09/2000	13.7	127200.3	3.3	201.0	223.8	107.0	27.1
3200	20:23:06	11/09/2000	-0.1	127575.1	3.3	201.7	222.3	0.0	27.3
3200	20:23:55	11/09/2000 L	og spee	d 4.5 knots.					
3190	20:26:53	11/09/2000		127950.3	3.1	202.9	221.0	0.0	27.7
3180	20:30:43	11/09/2000	9.5	128325.0	3.2	198.3	221.7	106.0	27.6
3170	20:34:38	11/09/2000	-0.2	128700.0	3.0	201.3	219.5	0.0	27.5
3160	20:38:31	11/09/2000	-6.9	129075.0	3.2	203.9	221.3	104.0	27.1
3150	20:42:26	11/09/2000	1.5	129450.6	3.0	200.7	220.5	0.0	26.8
3140	20:46:30	11/09/2000	-4.2	129825.4	2.9	202.9	219.2	0.0	26.9
3130	20:50:36	11/09/2000	-3.1	130199.9	3.0	202.0	223.2	0.0	27.1
3120	20:54:29	11/09/2000		130575.7	3.1	200.4	221.0	102.0	26.9
3110	20:58:30	11/09/2000		130950.2	2.9	204.6	219.0	0.0	27.3
3100	21:02:39	11/09/2000		131325.1	2.9	203.8	220.4	0.0	27.0
3100	21:03:07	11/09/2000 Le	og spee	d 4.6 knots.					

Spectra Report	Shotlog Information	12/09/00 03:32:09

Shot	Time	Date	DC	DA	BSP	HDG	CMG	DPT	FTH
3090	21:06:45	11/09/2000	8.4	131699.9	3.0	200.2	224.9	0.0	27.4
3080	21:10:54	11/09/2000		132075.2	3.0	207.1	217.3	96.0	27.9
3070	21:14:55	11/09/2000		132450.1	3.0	205.0	223.9	93.0	28.0
3060	21:18:55	11/09/2000		132824.6	3.0	196.9	223.3	94.0	27.7
3050	21:23:08	11/09/2000		133200.1	2.8	205.6	218.7	91.0	28.2
3040	21:27:12	11/09/2000		133575.4	3.0	203.3	220.3	92.0	28.2
3030	21:31:12	11/09/2000		133950.0	3.0	204.0	220.8	90.0	28.4
3020	21:35:11	11/09/2000		134325.2	3.0	202.7	218.8	92.0	28.2
3010	21:39:13	11/09/2000		134700.2	3.0	204.7	222.1	90.0	28.5
3000	21:43:06	11/09/2000		135075.0	3.2	206.4	222.3	90.0	28.7
3000	21:43:46			d 4.6 knots.		200.4	222.0	50.0	20.7
2990	21:47:02	11/09/2000		135450.0	3.0	204.2	218.6	91.0	28.5
2980	21:50:51	11/09/2000		135824.7	3.4	209.8	230.3	90.0	28.7
2970	21:54:25	11/09/2000		136200.0	3.3	200.8	221.7	89.0	28.1
2960	21:58:11	11/09/2000		136575.1	3.1	200.5	219.9	91.0	28.2
2950	22:01:58	11/09/2000		136949.8	3.3	202.3	224.8	91.0	28.3
2940	22:05:38	11/09/2000		137325.4	3.3	203.2	221.3	89.0	28.1
2930	22:09:14	11/09/2000		137700.4	3.4	206.2	221.4	88.0	28.0
2920	22:12:50	11/09/2000		138075.0	3.4	204.4	222.4	87.0	27.9
2910	22:16:33	11/09/2000		138450.3	3.2	204.9	222.0	0.0	27.9
2900	22:20:19	11/09/2000		138824.8	3.2	199.0	223.9	88.0	27.7
2900	22:20:50			d 4.6 knots.				00.0	27.7
2890	22:24:06	11/09/2000		139200.1	3.3	200.3	222.1	87.0	27.8
2880	22:27:54	11/09/2000	6.9	139574.4	3.1	194.4	223.9	91.0	28.0
2870	22:31:49	11/09/2000	-0.4	139950.0	3.2	201.8	226.0	86.0	28.4
2860	22:35:38	11/09/2000		140325.2	3.2	201.2	222.9	86.0	28.4
2850	22:39:27	11/09/2000	0.4	140700.4	3.1	201.7	218.7	86.0	28.6
2840	22:43:24	11/09/2000	2.8	141074.9	3.1	201.5	223.8	86.0	28.7
2830	22:47:30	11/09/2000	0.4	141450.1	2.9	201.7	220.5	85.0	28.8
2820	22:51:40	11/09/2000	-10.2	141825.1	2.9	203.5	219.1	85.0	29.1
2810	22:55:45	11/09/2000	2.8	142200.1	2.9	200.4	222.6	85.0	29.0
2800	22:59:50	11/09/2000	1.5	142575.1	2.9	199.0	221.0	85.0	29.2
2800	23:00:24	11/09/2000 Lo	og spee	d 4.4 knots.					
2790	23:03:50	11/09/2000		142950.3	3.1	208.0	221.4	84.0	29.7
2780	23:07:54	11/09/2000	1.5	143325.3	2.8	199.5	218.0	84.0	29.4
2770	23:12:08	11/09/2000		143700.2	2.9	201.9	219.3	85.0	29.6
2760	23:16:13	11/09/2000		144075.0	3.0	201.5	221.8	83.0	29.8
2750	23:20:14	11/09/2000		144450.0	3.1	201.8	222.4	84.0	30.0
2740	23:24:09	11/09/2000	8.0	144825.1	3.1	201.6	221.5	83.0	30.1
2730	23:28:04	11/09/2000		145199.7	3.1	203.9	222.9	85.0	30.4
2720	23:31:59	11/09/2000	-1.8	145574.5	3.2	202.3	224.6	84.0	30.6
2710	23:35:51	11/09/2000		145950.0	3.2	202.2	223.8	81.0	30.9
2700	23:39:35	11/09/2000		146325.2	3.5	206.3	225.1	81.0	31.1
2700	23:43:57			d 4.5 knots.					
2690	23:43:11	11/09/2000		146699.9	3.5	202.1	226.2	83.0	31.1
2680	23:46:50	11/09/2000		147074.9	3.3	201.3	222.6	84.0	31.1
2670	23:50:28	11/09/2000		147449.9	3.2	202.4	221.0	82.0	31.2
2660	23:54:09	11/09/2000		147825.1	3.3	201.0	220.7	82.0	31.0
2650	23:57:53	11/09/2000	0.9	148200.0	3.2	200.9	221.5	82.0	31.0

Spectra Report Shotlog Information 12/09/00 03:32:09

Shot	Time	Date	DC	DA	BSP	HDG	CMG	DPT	FTH
2645	23:59:48	11/09/2000	1 1	148387.3	3.2	201.1	223.7	01.0	04.0
2645	00:06:40			9:48 MSP L	0.2	201.1	223.1	81.0	31.0
2644	00:00:10	12/09/2000	0 8 0 8	148425.2	3.3	202.8	222.7	81.0	31.0
2634	00:03:56	12/09/2000		148800.1	3.2	202.6	220.9	82.0	30.9
2630	00:05:28	12/09/2000		148950.0	3.2	203.2	223.1	80.0	30.9
2620	00:09:18	12/09/2000		149325.1	3.1	202.3	222.3	80.0	30.8
2610	00:13:13	12/09/2000		149699.9	3.1	202.0	223.2	79.0	30.9
2600	00:17:07	12/09/2000		150074.9	3.1	202.2	223.3	78.0	31.1
2600	00:17:48			d 4.3 knots		202.2	220.0	70.0	51.1
2590	00:21:03	12/09/2000		150450.0	3.0	202.6	220.8	77.0	31.2
2580	00:24:56	12/09/2000		150825.2	3.1	201.6	221.1	76.0	31.1
2570	00:28:45	12/09/2000		151199.9	3.2	203.9	222.8	74.0	31.2
2560	00:32:37	12/09/2000		151575.0	3.2	202.6	222.7	74.0	31.2
2550	00:36:24	12/09/2000		151950.1	3.2	204.9	222.9	76.0	31.1
2540	00:40:06	12/09/2000		152324.8	3.3	203.6	221.2	75.0	31.0
2530	00:43:48	12/09/2000		152700.1	3.3	202.3	223.0	73.0	30.8
2520	00:47:23	12/09/2000		153075.1	3.3	204.5	221.7	72.0	30.6
2510	00:50:58	12/09/2000	6.1	153449.9	3.5	201.3	224.4	75.0	30.2
2500	00:54:29	12/09/2000	-2.6	153825.0	3.4	202.9	222.2	73.0	30.0
2500	00:56:31	12/09/2000 L	og spec	d 4.5 knots				, 0.0	50.0
2490	00:58:05	12/09/2000	4.6	154200.1	3.3	200.9	221.6	74.0	29.7
2480	01:01:42	12/09/2000	-3.5	154574.9	3.3	198.5	218.3	75.0	29.4
2470	01:05:16	12/09/2000	-3.2	154949.8	3.4	203.5	224.5	77.0	29.3
2460	01:08:46	12/09/2000	3.2	155325.0	3.4	198.4	221.2	77.0	28.7
2450	01:12:19	12/09/2000	-0.4	155700.0	3.4	201.2	222.5	77.0	28.5
2440	01:15:49	12/09/2000	6.1	156074.9	3.5	198.0	222.5	77.0	28.0
2430	01:19:16	12/09/2000	-0.3	156449.8	3.5	199.9	221.4	77.0	27.9
2420	01:22:46	12/09/2000	-0.9	156825.0	3.5	199.8	222.3	76.0	27.8
2410	01:26:13	12/09/2000	3.1	157200.0	3.6	199.9	224.0	76.0	27.9
2400	01:29:36	12/09/2000	1.1	157575.1	3.6	199.0	220.7	77.0	28.0
2400	01:30:22			d 4.6 knots					
2390	01:33:01	12/09/2000		157950.0	3.5	198.9	221.5	78.0	28.1
2380	01:36:25	12/09/2000		158325.1	3.6	198.2	221.5	78.0	28.2
2370	01:39:54	12/09/2000		158700.4	3.4	203.9	221.1	75.0	28.6
2360	01:43:31	12/09/2000		159074.5	3.3	196.6	224.8	76.0	28.7
2350	01:47:15	12/09/2000		159450.2	3.3	201.1	221.4	76.0	29.0
2340	01:50:55	12/09/2000		159825.2	3.1	199.7	219.4	78.0	29.1
2330	01:54:36	12/09/2000		160199.7	3.4	198.3	226.1	77.0	29.3
2320	01:58:17	12/09/2000		160575.0	3.3	200.6	222.5	79.0	29.5
2310	02:01:57	12/09/2000		160950.2	3.3	201.0	218.4	79.0	29.6
2300	02:05:31	12/09/2000		161324.7	3.4	202.0	225.7	78.0	29.7
<b>2300</b> 2290	02:06:00			d 4.4 knots	-				
2290	02:09:07	12/09/2000		161700.1	3.4	200.7	221.6	80.0	29.6
2280 2270	02:12:46 02:16:17	12/09/2000		162075.1	3.4	201.2	222.2	78.0	29.6
2260	02:16:17	12/09/2000		162450.3	3.4	199.3	220.4	78.0	29.5
2250	02:19:47	12/09/2000 12/09/2000		162824.9	3.5	201.3	224.0	80.0	29.7
2240	02:23:10	12/09/2000		163199.9	3.7	201.9	224.4	0.0	29.9
2230	02:29:49	12/09/2000		163575.0 163950.0	3.6	201.2	222.1	78.0	30.0
_200	UL.EJ.43	12/03/2000	c.4	100950.0	3.7	203.2	223.8	78.0	30.1

Spe	ectra Report			Shotlog Information				12/0			
									-		
C4-4	T:	0-4-	50	0.4	000	4100	01.40				

Shot	Time	Date	DC	DA	BSP	HDG	CMG	DPT	FTH
2220	02:33:07	12/09/2000	-0.2	164324.9	3.7	202.4	222.5	81.0	30.1
2210	02:36:22	12/09/2000		164699.9	3.7	198.3	224.9	80.0	29.9
2200	02:39:57	12/09/2000		165074.9	3.4	199.0	222.7	80.0	30.2
2200	02:40:22			d 4.5 knots.		100.0	L.L,	00.0	90.2
2190	02:43:18	12/09/2000		165449.9	3.6	199.7	223.3	0.0	30.4
2180	02:46:44	12/09/2000	-2.6	165825.0	3.5	198.6	219.5	81.0	30.6
2176	02:48:09	12/09/2000	-10.0	165975.0	3.5	204.6	221.0	80.0	31.0
2175	02:48:29	12/09/2000	-8.7	166012.4	3.5	204.2	222.7	79.0	31.1
2175	02:54:20	12/09/2000 U	TC 02:4	8 Last Prep			d 4.8 km	ots.	VI.,
2174	02:48:49	12/09/2000	-7.0	166049.9	3.6	203.9	223.8	81.0	31.1
2174	02:56:00	12/09/2000 U	TC 02:4	8 Start of Ru	un Out L	og spec	d 4.8 kr	ots.	•
2170	02:50:07	12/09/2000	-2.1	166200.1	3.8	203.3	224.3	80.0	31.1
2166	02:51:23	12/09/2000	5.2	166350.0	3.8	203.4	225.2	80.0	31.1
2160	02:53:24	12/09/2000	5.9	166575.4	3.6	201.8	220.5	80.0	31.1
2150	02:56:43	12/09/2000	6.0	166949.4	3.6	196.0	223.1	81.0	31.2
2140	03:00:06	12/09/2000	2.5	167324.9	3.6	198.5	222.5	80.0	31.4
2130	03:03:27	12/09/2000	<b>-</b> 0.7	167699.9	3.7	198.0	222.1	82.0	31.7
2120	03:06:46	12/09/2000	-9.5	168074.9	3.8	204.1	223.6	80.0	32.2
2110	03:09:56	12/09/2000		168450.1	3.8	198.3	222.6	81.0	31.9
2100	03:13:11	12/09/2000	-3.2	168825.1	3.8	200.3	222.2	80.0	31.9
2100	03:13:25			d 4.6 knots.					
2090	03:16:22	12/09/2000		169200.0	3.8	199.5	221.0	79.0	31.8
2080	03:19:35	12/09/2000		169575.1	3.8	200.0	223.4	81.0	31.6
2079	03:19:53	12/09/2000	0.2	169612.5	3.8	200.3	223.7	79.0	31.6
2078	03:20:12	12/09/2000	1.2	169650.1	3.8	201.1	223.9	80.0	31.6
2077	03:20:31		2.1	169687.5	3.8	200.6	223.7	79.0	31.6
2076	03:20:50			169725.0	3.9	199.7	223.9	78.0	31.5
2075	03:21:09	12/09/2000	4.9	169762.5	3.9	200.1	224.4	79.0	31.5
2074	03:21:28	12/09/2000		169799.9	3.8	199.2	223.5	81.0	31.4
2074	03:25:36	12/09/2000 U	TC 03:2	1 LSP,LGSP	'.Log sp	eed 4.7	knots.		