

## DAILY OPERATIONS REPORT # 9

### ANTARES 3D MARINE SEISMIC SURVEY

<b>Contractor:</b>	PGS	<b>Vessel:</b>	Orient Explorer
<b>Woodside Reps:</b>	Ken Haig, Stephen Burt	<b>Party Chief:</b>	Stephen Beer
<b>WEL project Manager:</b>	Ralph Weiss	<b>Date:</b>	Saturday 25 <sup>th</sup> Oct 2003

#### 1. PRODUCTION SUMMARY

October 25th, 2003

Seq	Line Name	Hdg	Line Type	Line Status	FcSP	LcSP	Ch Sailed
001	WO3ANT-1116P1	126.0	Prime	Scratched	0	0	0.00000
002	WO3ANT-1116P2	126.0	Prime	Incomplete	1782	2944	21.80625
003	WO3ANT-1156P1	305.0	Prime	Completed	2836	893	36.45000
004	WO3ANT-1108P1	126.0	Prime	End of Day	1001	2182	22.16250
Total 10/25/2003 :							80.41875

#### 2. STATISTICAL ANALYSIS (DECIMAL HOURS)

##### Line Type Analysis

	Period	(%)	Survey	(%)
Prime	80.41875	100	80.41875	100
Total :	80.41875	100	80.41875	100

##### Line Charge Analysis

<u>Sailed Kms</u>	Period	(%)	Survey	(%)
Prime	83.77500	100	83.77500	100
Total :	83.77500	100	83.77500	100

<u>Charged Sailed Kms</u>	Period	(%)	Survey	(%)
Prime	80.41875	100	80.41875	100
Total :	80.41875	100	80.41875	100

<u>CMP Kms</u>	Period	(%)	Survey	(%)
Prime	643.35000	100	643.35000	100
Total :	643.35000	100	643.35000	100

<u>Fullfold Sailed Kms</u>	Period	(%)	Survey	(%)
Prime	76.36875	100	76.36875	100
Total :	76.36875	100	76.36875	100

<u>Fullfold CMP Kms</u>	Period	(%)	Survey	(%)
Prime	610.95000	100	610.95000	100
Total :	610.95000	100	610.95000	100

<u>Fullfold Square Kms</u>	Period	(%)	Survey	(%)
Prime	15.27375	100	15.27375	100
Total :	15.27375	100	15.27375	100

<b>Time Activity Analysis</b>				
	<b>Period</b>	<b>(%)</b>	<b>Survey</b>	<b>(%)</b>
Recording	11.700	49	11.700	6
Line Change	4.500	19	4.500	2
Extended L/C	0.417	2	0.417	0
Weather	0.000	0	46.000	22
Instrument	0.217	1	0.217	0
Source	1.917	8	1.917	1
Travel t/f Port	0.000	0	4.250	2
Mobilisation	5.250	22	136.000	66
<b>Total :</b>	<b>24.000</b>	<b>100</b>	<b>205.000</b>	<b>100</b>

<b>Time Charge Analysis</b>				
	<b>Period</b>	<b>(%)</b>	<b>Survey</b>	<b>(%)</b>
Prime	11.700	49	11.700	6
Operations	4.500	19	4.500	2
Standby	0.417	2	46.417	23
Contractor	2.133	9	2.133	1
Mob/Demob	5.250	22	140.250	68
<b>Total :</b>	<b>24.000</b>	<b>100</b>	<b>205.000</b>	<b>100</b>

**3. TIME SUMMARY**October 25th, 2003

<b>Start</b>	<b>End</b>	<b>Hours</b>	<b>Description / Comments</b>	<b>Charge</b>
00:00	00:46	0.767	MOB/DeMOB (Mobilisation) Source firing - run setup tests - streamer separation and offset checks and measurements.	Mob/Demob
00:46	01:17	0.517	MOB/DeMOB (Mobilisation) Run test line to check offsets and system setup. Problems with source arrays. Prepare to recover array 1.	Mob/Demob
01:17	05:15	3.967	MOB/DeMOB (Mobilisation) Complete array repairs - run to start of line and record Nearfield Hydrophone Tests.	Mob/Demob
05:15	05:28	0.217	Equip.Fail (Instrument) Line portion aborted and scratched. Not to be processed. Autofire on array 1 and missed the first 80 shots due to incorrect instrument settings at start of the survey. SP range 1001-1079	Contractor
05:28	07:23	1.917	Seq 001 : Line WO3ANT-1116P1 Abort line attempt due to auto-fire on . SP 1080-1258 - continue down the line till array repairs are complete.	Contractor
07:23	10:27	3.067	Seq 002 : Line WO3ANT-1116P2	Prime
10:27	12:42	2.250	Production (Line Change) Nominal 2.25 hour line change	Operations
12:42	12:53	0.183	Obstruction (Extended L/C) Extended line change due to a tear-drop turn to leave shorter lines till the Semac 1 arrives on location. This means we will concentrate on the longer lines which will be affect more by the Semac operations.	Standby
12:53	17:08	4.250	Seq 003 : Line WO3ANT-1156P1	Prime
17:08	19:23	2.250	Production (Line Change) Nominal 2.35 hour line change.	Operations
19:23	19:37	0.233	Obstruction (Extended L/C) Extended line change due to survey shape and short available distance between lines. Winds increasing as is the swell.	Standby
19:37	24:00	4.383	Seq 004 : Line WO3ANT-1108P1 Line continued through midnight. Time change to local summer time, (+1 hour) hence the apparent slow speed. on this line.	Prime
<b>Total :</b>		<b>24.000</b>		

**Chase/Supply Vessel Status:**

Southern Salvor on site with Orient Explorer.  
Perfect Lady in Port Fairy with crew person from previous in Hospital and returned late morning.

**Problems / Comments:**

Still having source problems at the start of the day. The first line attempted was aborted and we were forced to recover the Stbd array due to auto-fires. Meanwhile the Port source was still operating.

Missed the start of the first line due to an incorrect baud rate in the Syntrak and this was followed shortly after by an auto-fire – the line portion was aborted and will be reshot. Meanwhile the vessel continued down the line till the array was repaired and the line restarted and finally completed. Since then production has been on-going.

Source performance has been good since the initial poor start with good pressure, volume timing and control being maintained.

Streamerr performance and depth control has been acceptable in the sloppy sea conditins we have experienced over the last 24 hours.

**SEMAC 1**

Advised the arrival has been delayed till 29<sup>th</sup> Oct.

**Crew change for Orient**

Vessel is scheduled to be in Portland at 06:00 hours on Wednesday 29<sup>th</sup> Oct. We should be alongside at approximately 07:15 hours local time.

**HSE & Audit Issues**

Medical Treatment Case:- One crew person on the Perfect Lady collapsed during the night, (Friday 24<sup>th</sup>) and had to be taken back to Port Fairy to seek medical attention.

Update: Doctors have not been able to find any reason for the patients fainting spell and he is going to be referred back to the Mount Gambier Hospital for further checking and diagnosis. He has had ECG tests etc, performed at the local Port Fairy/Warrnambool Hospital.

A general Crew Safety Meeting was conducted for all non-essential persons required to attend. Minutes were taken and will be posted when available.

**Cetacean Sightings**

Nil – whale watch being maintained.

**General Weather Comments:**

Conditions fair for most of the day. Early morning rain shower in the area. Winds moderate to 21 knots at times, with an associated sea and swell up to 1.75m and increasing in the afternoon and generally continuing to deteriorate slowly.

**Close of the day.**

Acquiring data on line 1108, heading 126° - moderate swell bursts being observed.

Winds: SW 20 knots

Swell: SSW 2.0m - confused

SEQ	COMMENTS
001 Dir 125°	<p><b>W03ANT1116 P1 SP 1001-1080 Scratched – Not to be processed</b>            Line aborted – Not to be processed. Missed SP 1001 – 1080 due to incorrect baud rate into Syntrak and forced to reboot the system at the FSP.            At SP 1258 – last SP of the line an autofire on array occurred and the line was terminated.            All data scratched – not to be processed.</p>
002 Dir 125°	<p><b>W03ANT1116 P2 SP 1081 – 1781 (Details still to be confirmed and checekd on this line)</b>            Data Tape Nos: 35612 - 35613            Restart of previous line sequence – this line portion is complete. Shotpoints 1001-1781 to be reshot.            Streamer depths slightly erratic due to the sea and swell conditions.            Weather: Winds SE 25-30 Knots , Sea and Swell: S 2-3m.            Noise at SOL: 5µB, EOL: 5µB (6Hz lo-cut filter applied)            Water Depth: SOL:m, EOL: m            Feather at SOL: -°, EOL : -°, Max: -°            Streamer Depth: 7.8 – 8.0m due to prevailing swell – acceptable depth control.            Noisy Traces: Nil logged – random swell bursts            Gun Volume @ SOL: 2500 , EOL: 2500            Gun edits: still to be confirmed            Missed Shots: still to be confirmed</p>
003 Dir 305°	<p><b>W03ANT1156 P1 SP 2836-893</b>            Data Tape Nos: 35614 - 35617            Streamer depths slightly erratic due to the sea and swell conditions. Streamer depth set to 8.5m to reduce effects of swell interference. Random swell noise bursts observed throughout the line.            SP 1311, file number – incorrect SP number in header, should read 1318            Weather: Winds SE 20 Knots , Sea and Swell: SSW 2m.            Noise at SOL: 6-7µB, EOL: 7-8µB (6Hz lo-cut filter applied)            Water Depth: SOL: 56.2m, EOL: 36.8m            Feather at SOL: -1.9°, EOL : -1.07°, Max: -3.0°            Streamer Depth: 8.5 metres due to prevailing swell – acceptable depth control.            Noisy Traces: Nil logged – random swell bursts observed throughout the line.            Gun Volume @ SOL: 2500 , EOL: 2500            Gun edit logged : 2 timing errors above 1.5ms, 4 spread errors above 2ms            Missed Shots: 2623, 2356, 2355 due to vessel speed variation in swell.</p>
004 Dir 125°	<p><b>W03ANT1108 P1 SP 1001 - 2944</b>            Data Tape Nos: 35618 - 35621            Streamer depths slightly erratic due to the sea and swell conditions. Streamer depth set to 8.5m to reduce effects of swell interference. Random swell noise bursts observed throughout the line.            Weather: Winds SE 25-30 Knots , Sea and Swell: S 2-3m.            Noise at SOL: 5µB, EOL: 5-6µB (6Hz lo-cut filter applied)            Water Depth: SOL:38.2m, EOL: 53.6m            Feather at SOL: -2.1°, EOL : -3.2°, Max: -3.2°            Streamer Depth: 8.5 metres due to prevailing swell – acceptable depth control.            Noisy Traces: Nil logged – random moderate to strong swell bursts throughout the line.            Gun Volume @ SOL: 2500 , EOL: 2500            Gun edits logged : 3 timing errors above 1.5ms – 3 spread errors above 2ms            Missed Shots: 1127, 2863 due to vessel speed variation in swell.            From SOL to EOL depth controller 4 – no communications</p>
005	

**HSE Daily Statistics - 25/10/2003****Comments:**

No accidents or lost time incidents reported. No spillage of oil or loss of containment overboard. Whale watches have been maintained - no sightings.

**HSE Items:**

13:00 - 14:00

**Safety Meeting [SM]**

Conduct general crew safety meeting - all non-essential persons required to attend.

Description	Day	Month	Survey
<b>Incidents</b>			
Near Miss Incident (NMI)	0	0	0
First Aid Case (FAC)	0	0	0
Medical Treatment Case (MTC)	0	1	1
Restricted Work Case (RWC)	0	0	0
Fatality (FT)	0	0	0
Lost time Injury (LTI)	0	0	0
Oil Spill (OS)	0	0	0
Illness/Ailment (IA)	0	0	0
Environmental Incident (EI)	0	0	0
Hazard Report (HR)	0	0	0
Positive Observation (PO)	0	2	2
Non work related illness	0	0	0
<b>Events</b>			
Stop Cards Issued ( )	0	3	3
Small Boat Launches ( )	0	2	2
Helicopter Landing/Takeoff (HL)	0	0	0
MOB Drill (MD)	0	0	0
Fire Drill (FD)	0	0	0
Emergency Boat Drill/Tow Drill (EBD)	0	3	3
Safety Meeting (SM)	1	2	2
Inspection Tour (IT)	0	2	2
Safety Committee Meeting (SCM)	0	0	0
Inspection/Tour/Safety Check (HSE)	0	5	5
Toolbox Meeting/Debrief (TB)	0	9	9
Cetacean Sighting (CS)	0	0	0
Bunker and Resupply (BR)	0	0	0
Oil Recovery (OR)	0	0	0
Abandon Ship (AS)	0	0	0
<b>Totals</b>			
No. Marine Crew	35	316	316
No. Seismic Crew	21	189	189
No. Contractors	3	27	27
No. Lost Time Injuries	0	0	0
Exposure Hours *	708	6384	6384
Small Boat Hours (Decimal hours)	0.00	4.48	4.48
Small Boat Exposure Hours (Dec. hours)	0.00	17.93	17.93
Fuel Usage (Cubic Metres)	14	65	65
* Exposure hours calculated at 12hrs per day per person.			

## Navigation report submitted by Stephen Burt for Sunday 26<sup>th</sup> Oct

### General:

Commenced production sea conditions have been marginal during the later part of the day that has resulted in an increase in noise to the in-sea systems. Sprint operator reports that the seabed reflections have affected the acoustic ranges as expected in the relatively shallow water depths and hard seabed. Compass data was also noticeably noisier on Sequence 003 after the sea conditions worsened.

Weights used in SPRINT checked and agreed also confirmed the compass bearing is being used to orientate the source position.

Please note that no speed through the water logs is possible as the ships log is down.

Feather angles have been constant to date and minimal.

Vessel positions are being logged every 1-minute as requested.

No TSP dip was made today due to the poor sea conditions crew are initially using a value recorded in Portland Harbour whilst the vessel was at anchor prior to the start of this survey of 1504.6. As a check the **GDEM: Model** confirmed the value in Portland however TSP dips should be made in the survey area as per contract. Results from the model are as follows:

### **GDEM: Generalised Digital Environmental Model**

Requested latitude:- 38.624333 longitude: + 142.817000

Returned latitude: - 38.500000 longitude: + 143.000000

Number of cycles = 5

Valid Julian day range = 274 - 304

Cycle, depth, temperature, salinity, sound velocity

Cycle,	depth	Temperature	salinity	VP
0	0	13.91	35.130001	1504.04
1	10	13.84	35.150002	1504.00
2	20	13.73	35.150002	1503.81
3	30	13.68	35.169998	1503.83
4	46	13.62	35.169998	1503.89

The following systems are being used during this survey:

### Acoustics

Sonardyne: SIPS1 Version 7.00.05-T

Three acoustic networks and the front network have two additional pods placed on the inner two streamers due to the noise levels around these two cables.

### Compasses

DigiCourse System 3, Bird 5011 Software Version 3.1.2

### DGPS

Nav System I, V1G1: MRDGPS Ver. 2.06.07 using Starfix DGPS P190:

Nav System II, V1G2: MultiFix 4 ver1.01 Skyfix DGPS P294:

Nav System III, V1G3: Seadiff Ver. 7.05n using Starfix DGPS

Nav System IV, V1G4: MultiFix 4 ver1.01 Skyfix DGPS

(Combination of the first three systems used as prime online)

### rGPS

Seatrack 320 (source) and

Seatrack 220 (tailbuoys)

Software Versions Seadiff 7.05 and MRDGPS rGPS v 2.08.02

### Post Processing

Concept Systems SPRINT Version 3.1.13

### Heading

Seapath 220 used as the prime heading.

### Echo Sounder

Atlas Deso 25 33Khz and 210Khz (210 KHz set as Master in SPECTRA)

**Online Navigation System**

SPECTRA v 9.8.05

**Binning System**

CENSUS v 4.4.1

**Progress:**

Shot to Sequence: #004 At the time of writing no lines had been processed.

**NTBP Sequences:**

001

**Dead/Bad Units:**

RGPS - All systems are operational

Acoustics - All pods are operational.

Compasses - All birds are operational.

Regards,

*Ken Haig and Stephen Burt*

*Woodside Energy Limited Client Representatives*

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