

## DAILY OPERATIONS REPORT # 19

### ANTARES 3D MARINE SEISMIC SURVEY

<b>Contractor:</b>	<b>PGS</b>	<b>Vessel:</b>	<b>Orient Explorer</b>
<b>Woodside Reps:</b>	<b>Ken Haig, Stephen Burt</b>	<b>Party Chief:</b>	<b>E. Jettestad</b>
<b>WEL project Manager:</b>	<b>Ralph Weiss</b>	<b>Date:</b>	<b>Tuesday 04<sup>th</sup> Nov 2003</b>

#### 1. PRODUCTION SUMMARY

November 4th, 2003

Seq	Line Name	Hdg	Line Type	Line Status	FcSP	LcSP	Ch Sailed
018	WO3ANT-1044P1	125.0	Prime	Completed	1001	2944	36.45000
019	WO3ANT-1172P1	305.0	Prime	Completed	2759	893	35.00625
020	WO3ANT-1020P1	125.0	Prime	Completed	1001	2944	36.45000
021	WO3ANT-1180P1	305.0	Prime	End of Day	2730	1356	25.78125
						Total 11/4/2003 :	133.68750

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

##### Line Type Analysis

	Period	(%)	Survey	(%)
Prime	133.68750	100	614.13750	100
Total :	133.68750	100	614.13750	100

##### Line Charge Analysis

	Period	(%)	Survey	(%)
Prime	133.68750	100	617.49375	100
N/C Reshoot	0.00000	0	1.16250	0
Total :	133.68750	100	618.65625	100

##### Charged Sailed Kms

	Period	(%)	Survey	(%)
Prime	133.68750	100	614.13750	100
Total :	133.68750	100	614.13750	100

##### CMP Kms

	Period	(%)	Survey	(%)
Prime	1,069.50000	100	4,913.10000	100
Total :	1,069.50000	100	4,913.10000	100

##### Square Kms

	Period	(%)	Survey	(%)
Prime	26.73750	100	122.82750	100
Total :	26.73750	100	122.82750	100

##### Fullfold Sailed Kms

	Period	(%)	Survey	(%)
Prime	127.61250	100	579.71250	100
Total :	127.61250	100	579.71250	100

##### Fullfold CMP Kms

	Period	(%)	Survey	(%)
Prime	1,020.90000	100	4,637.70000	100
Total :	1,020.90000	100	4,637.70000	100

##### Fullfold Square Kms

	Period	(%)	Survey	(%)
Prime	25.52250	100	115.94250	100
Total :	25.52250	100	115.94250	100

##### Time Activity Analysis

	<b>Period</b>	<b>(%)</b>	<b>Survey</b>	<b>(%)</b>
Recording	17.117	71	80.567	18
Line Change	6.883	29	36.500	8
Extended L/C	0.000	0	1.900	0
Weather	0.000	0	65.733	15
Instrument	0.000	0	2.983	1
Source	0.000	0	5.200	1
Streamer	0.000	0	36.450	8
Ship	0.000	0	0.500	0
Travel t/f Port	0.000	0	4.250	1
Port/Crew Change	0.000	0	71.917	16
Contractor	0.000	0	3.000	1
Mobilisation	0.000	0	136.000	31
Total :	24.000	100	445.000	100

#### Time Cause/Reason Analysis

	<b>Period</b>	<b>(%)</b>	<b>Survey</b>	<b>(%)</b>
Production	24.000	100	117.067	26
Weather	0.000	0	65.733	15
Equip.Fail	0.000	0	45.133	10
MOB/DeMOB	0.000	0	140.250	32
Wside.Req	0.000	0	35.950	8
Crew Change	0.000	0	35.967	8
PGS	0.000	0	3.000	1
Survey Shape	0.000	0	1.900	0
Total :	24.000	100	445.000	100

#### Time Charge Analysis

	<b>Period</b>	<b>(%)</b>	<b>Survey</b>	<b>(%)</b>
Prime	17.117	71	80.567	18
Operations	6.883	29	36.500	8
Standby	0.000	0	103.583	23
Contractor	0.000	0	84.100	19
Mob/Demob	0.000	0	140.250	32
Total :	24.000	100	445.000	100

### 3. TIME SUMMARY

November 4th, 2003

<b>Start</b>	<b>End</b>	<b>Hours</b>	<b>Description / Comments</b>	<b>Charge</b>
00:00	01:01	1.017	Production (Line Change)	Operations
01:01	05:46	4.750	Seq 018 : Line WO3ANT-1044P1	Prime
05:46	08:00	2.233	Production (Line Change)	Operations
08:00	12:25	4.417	Seq 019 : Line WO3ANT-1172P1	Prime
12:25	14:23	1.967	Production (Line Change)	Operations
14:23	19:03	4.667	Seq 020 : Line WO3ANT-1020P1	Prime
19:03	20:43	1.667	Production (Line Change)	Operations
20:43	24:00	3.283	Seq 021 : Line WO3ANT-1180P1	Prime
	Total :	24.000		

**Chase/Supply Vessel Status:**

Southern Salvor and Perfect Lady on site.

**Chase Boat October Fuel Consumption**

Southern Salvor – Period 12<sup>th</sup> Oct (depart Tasmania) to 31<sup>st</sup> October – 15.43 cubic metres – 20 days

Perfect Lady – Period 17<sup>th</sup> October (depart Pt McDonnell) – 29<sup>th</sup> Oct (refuel in Pt Fairy) 3176 litres – 13 days

Both vessels have been requested to supply end of survey totals.

**Comments/Problems:**

Continue acquisition in fair weather and sea conditions.

Bird 11 on streamer 4 failed just prior to the start of line 1020. The portion of streamer was raised and the workboat deployed to change the bird while acquisition continued. SP 1215-1427 for traces 1092-1296 were edited. As this was an inner streamer and minimal overlap was being steered it should have no effect on coverage and the line is considered complete. If infill is required over the area it should be on PGS account.

Extraction errors have been observed on a number of lines and shots edits have been logged – the problem is water in a section of connector and until it goes solid and the entire cable 3 dies we cannot trouble-shoot or determine where the water is. The only thing we know is that it is in the lead, front connect, head stretch or first active live section connector. We have checked what we can on-board but to date no success. We shall monitor and continue with the shot editing as necessary.

Line 1172 was stated slightly early to attain full coverage at the block boundary on all traces. This is due to the sloping edge of the block in this regions.

Line 1180 – suffered badly from extraction errors where data is lost due to incomplete transmission through the system as explained above due to water in a connector or an intermittent short circuit. This will continue to be monitored.

All data edits and Obs Logs are re-checked again after production by the OBP QC persons and they reissue new corrected Obs Logs with improved editing and line information. The comments as supplied by me are from the 1<sup>st</sup> preliminary logs and not the finalised version, as there is some delay till the OBP logs are completed. All preliminary logs are then discarded and the corrected logs are included with the data shipment and tapes.

**Semac-1**

Still on location near Port Campbell, but there is activity with work boats etc in the area. No interruptions to date.

**Cetacean Report:**

No sightings reported.

**Weather Comments:**

Swell less than 2 metres, winds 7-12 knots at times.

**Close of the day and local time updates.**

Continuing acquisition on line 1172 heading 305° - weather fine, winds 5-10 knots, sea and swell 1.5 to 2 metres at times. The line has since been completed and the next line to acquire will be 1052, heading 125°

SEQ	COMMENTS FROM PRELIMINARY OBS LOGS
<b>018</b> <b>Dir 125°</b>	<b>W03ANT1044 P1 SP 1001 - 2944 Line now complete</b> Data Tape Nos 35671 - 35674 Weather: Winds 7 knots , Sea and Swell: 2 metres at times. Noise at SOL: 4-6µB, EOL: 4-6µB (6Hz lo-cut filter applied) Water Depth: SOL: 26.7m, EOL: 55.2m Feather at SOL: 0.3°, EOL : 0.3°, Max: 0.3 ° Streamer Depth: 8 metres - acceptable. Noisy Traces: 204, 300, 299, 312, 13 noisy and 254 intermeittent spiking Extraction Errors: 959, 1007, 1015, 1016, 1094, 1096, `098, 1107, 1133, 1134, 1137, 1150, 1794, 2899 Gun Volume SOL: 2500 , EOL: 2500. Gun edits logged : NIL Timing errors above 1.5ms: SP 1004,1855,2071, 2336, 2808, 2822 Missed Shots: NIL: 1097, 2107, 2260
<b>019</b> <b>Dir 305°</b>	<b>W03ANT1172 P1 SP 2168 – 893 Complete</b> Data Tape Nos 35675-35678 Weather: Winds 4-9 knots , Sea and Swell: 2 metres at times. Noise at SOL: 4-6µB, EOL: 4-6µB (6Hz lo-cut filter applied) Water Depth: SOL: 58.4m, EOL: 38.2m Feather at SOL: -1.3°, EOL : 0.0°, Max: -1.3 ° Streamer Depth: 8 metres - acceptable. Noisy Traces: 204, 300, 299, 312, 13 noisy and 254 intermeittent spiking Gun Volume SOL: 2500 , EOL: 2500. Gun edits logged : Delta errors over 2.1ms : 2280,1936,1859, 1848, 1851,1703,1643,1601,1505 Timing errors above 1.5ms: NIL Missed Shots: SP SP 1925-1923, 1848,1771,1270, ExtractionErrors: 1574, 1568, 1570, 1253, 1239
<b>020</b> <b>Dir 125°</b>	<b>W03ANT1020 P1 SP 1001 - 2944 Complete</b> Data Tape Nos 35679-35683 Weather: Winds 4-9 knots , Sea and Swell: 2 metres at times. Noise at SOL: 4-5µB, EOL: 4-5µB (6Hz lo-cut filter applied) Water Depth: SOL: 35.3m, EOL: 52.6m Feather at SOL: -1.6°, EOL : 0.7°, Max: -1.6 ° Streamer Depth: 8 metres - acceptable. From SOL to SP 1215 Cable 4 Bird 11 deep to 10m. Noisy Traces: 204, 300, 299, 312, 13 noisy and 254 intermeittent spiking Gun Volume SOL: 2500 , EOL: 2500. Gun edits logged : Delta errors over 2.1ms : 1026, 1998, 2627 Timing errors above 1.5ms: NIL Missed Shots/No data records: SP 1492, 1526, 1574, 1758-1756, 2538, 2921, 2927, 2928 Trace Edits: 1092-1296 to be edited from SP 1215-1427 to replace depth controller cable 4, bird 11 Tape Error: SP 1529
<b>021</b> <b>Dir 305°</b>	<b>W03ANT1180 P1 SP 2730 - 893 Incomplete – Extraction Errors SP 2780-2475 to be reshot</b> Data Tape Nos 35684-35687 Weather: Winds 10 knots , Sea and Swell: 2 metres at times. Noise at SOL: 4-5µB, EOL: 4-5µB (6Hz lo-cut filter applied) Water Depth: SOL: 57.5m, EOL: 39.2m Feather at SOL: -1.6°, EOL : 0.7°, Max: -1.6 ° Streamer Depth: 8 metres - acceptable. Noisy Traces: 204, 300, 299, 312, 13 noisy and 254 intermeittent spiking Gun Volume SOL: 2500 , EOL: 2500. Gun edits logged : Delta errors over 2.1ms: Sp 1920, 2561. 2174, 1920. Gun Sequence: Guns firing out of sequence and corrected at SP 2762 Timing errors above 1.5ms: 2471 Missed Shots/No data records: SP 2576, 2568, 2562, 2489, 2485, 2484, 2456, 2455, 2454, 2442-2425 No data recorded from SP 2443-2424 due to reinitialising streamer 3 because of multiple extraction errors. (To be confirmend by OBP QC on completion)

### HSE Daily Statistics - 04/11/2003

#### Comments:

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

#### HSE Items:

13:00 - 13:45      Audit/Inspection/Training/Safety . [HSE]  
HSE training by PGS HSE Adviser.

13:05 - 13:15      Toolbox Meeting/Debrief [TB]  
Toolbox meeting prior to work-boat deployment

13:23 - 13:59      Work Boat [WB] - 4 occupants  
Deploy workboat for removal of leads from the head of streamer 4.

14:30 - 14:45      Toolbox Meeting/Debrief [TB]  
Meeting conducted prior to launch of the workboat for depth controller replacement.

14:56 - 15:28      Work Boat [WB] - 4 occupants  
Workboat launched to replace depth controller 11 on streamer 4.

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	0	0
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	0	3
Equipment Loss/Damage (ELD)	0	0	0
Non work related illness (NWR)	0	0	1
<b>Events</b>			
Stop Cards Issued ( )	0	0	5
Small Boat Launches ( )	2	4	6
Helicopter Landing/Takeoff (HL)	0	0	0
MOB Drill (MD)	0	0	0
Fire Drill (FD)	0	1	1
Emergency Boat /Towing Drill (EBD)	0	0	7
Safety Meeting (SM)	0	0	2
HSE Induction-Inspection (IT)	0	1	4
Safety Committee Meeting (SCM)	0	1	1
Audit/Inspection/Training/Safety . (HSE)	1	2	7
Toolbox Meeting/Debrief (TB)	2	6	17
Cetacean Sighting (CS)	0	0	0
Bunker and Resupply (BR)	0	0	0
Oil Spill Drill (OR)	0	0	0
Personnel transfer at sea (PT)	0	0	0
<b>Totals</b>			
No. Marine Crew	35	140	661
No. Seismic Crew	22	88	406
No. Contractors	3	12	57
No. Lost Time Injuries	0	0	0
Exposure Hours *	720	2880	13488
Small Boat Hours (Decimal hours)	1.13	3.90	8.38
Small Boat Exposure Hours (Dec. hours)	4.53	15.60	33.53
Fuel Usage (Cubic Metres)	21	37	192

\* Exposure hours calculated at 12hrs per day per person.

**Navigation report submitted by Stephen Burt for Wednesday 04th November 2003**

Streamer depths have been set to 8m from Sequence 018. System comparisons between the MultiFix Height Aided solution and the 3D fit have been consistent since Sequence 018. However during sequence 018 the comparisons did increase to around 5m for 20-30 pops when the number of satellites dropped to 4. Spectra plots did confirm that the heights in the 3D fit were erratic during this period but as expected the height aided heights were consistent.

**Progress:**

Shot to Sequence Number 21 Processed to Sequence Number 018 QC'd to Sequence Number 017, problems have been reported processing sequence 019.

**NTBP Sequences:**

001

**Dead/Bad Units:**

RGPS: - All pods are operational.

Acoustics – Gun pod G2T3 has been poor since sequence 016.

Compasses: S4C11 was changed online during Sequence 020 resulting in a number of edits.

Regards,

*Ken Haig and Stephen Burt*

*Woodside Energy Limited Client Representatives*

*Phone: ++47 6751 5154 Office Direct*

*Fax: ++47 6751 5156 Recording Room*

*e-mail: [oriclient@pgs.com](mailto:oriclient@pgs.com)*