

## DAILY OPERATIONS REPORT # 16

### 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>Stephen Beer</b>                      |
| <b>WEL project Manager:</b> | <b>Ralph Weiss</b>            | <b>Date:</b>        | <b>Saturday 01<sup>st</sup> Nov 2003</b> |

#### 1. PRODUCTION SUMMARY

November 1st, 2003

| Seq | Line Name     | Hdg   | Line Type | Line Status | FcSP | LcSP              | Ch Sailed |
|-----|---------------|-------|-----------|-------------|------|-------------------|-----------|
| 014 | WO3ANT-1092P1 | 126.0 | Prime     | Incomplete  | 1100 | 2944              | 34.59375  |
| 015 | WO3ANT-1164P1 | 305.0 | Prime     | End of Day  | 2813 | 1861              | 17.86875  |
|     |               |       |           |             |      | Total 11/1/2003 : | 52.46250  |

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

##### Line Type Analysis

|         | Period   | (%) | Survey    | (%) |
|---------|----------|-----|-----------|-----|
| Prime   | 52.46250 | 100 | 438.37500 | 100 |
| Total : | 52.46250 | 100 | 438.37500 | 100 |

##### Line Charge Analysis

|         | Period   | (%) | Survey    | (%) |
|---------|----------|-----|-----------|-----|
| Prime   | 52.46250 | 100 | 441.73125 | 100 |
| Total : | 52.46250 | 100 | 441.73125 | 100 |

##### Charged Sailed Kms

|         | Period   | (%) | Survey    | (%) |
|---------|----------|-----|-----------|-----|
| Prime   | 52.46250 | 100 | 438.37500 | 100 |
| Total : | 52.46250 | 100 | 438.37500 | 100 |

##### CMP Kms

|         | Period    | (%) | Survey      | (%) |
|---------|-----------|-----|-------------|-----|
| Prime   | 419.70000 | 100 | 3,507.00000 | 100 |
| Total : | 419.70000 | 100 | 3,507.00000 | 100 |

##### Square Kms

|         | Period   | (%) | Survey   | (%) |
|---------|----------|-----|----------|-----|
| Prime   | 10.49250 | 100 | 87.67500 | 100 |
| Total : | 10.49250 | 100 | 87.67500 | 100 |

##### Fullfold Sailed Kms

|         | Period   | (%) | Survey    | (%) |
|---------|----------|-----|-----------|-----|
| Prime   | 50.43750 | 100 | 414.07500 | 100 |
| Total : | 50.43750 | 100 | 414.07500 | 100 |

##### Fullfold CMP Kms

|         | Period    | (%) | Survey      | (%) |
|---------|-----------|-----|-------------|-----|
| Prime   | 403.50000 | 100 | 3,312.60000 | 100 |
| Total : | 403.50000 | 100 | 3,312.60000 | 100 |

##### Fullfold Square Kms

|         | Period   | (%) | Survey   | (%) |
|---------|----------|-----|----------|-----|
| Prime   | 10.08750 | 100 | 82.81500 | 100 |
| Total : | 10.08750 | 100 | 82.81500 | 100 |

##### Time Activity Analysis

|           | Period | (%) | Survey | (%) |
|-----------|--------|-----|--------|-----|
| Recording | 7.133  | 30  | 57.750 | 15  |

|                  |        |     |         |     |
|------------------|--------|-----|---------|-----|
| Line Change      | 2.250  | 9   | 26.300  | 7   |
| Extended L/C     | 0.400  | 2   | 1.900   | 1   |
| Weather          | 13.983 | 58  | 65.733  | 18  |
| Instrument       | 0.233  | 1   | 0.450   | 0   |
| Source           | 0.000  | 0   | 5.200   | 1   |
| 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  | 19  |
| Contractor       | 0.000  | 0   | 3.000   | 1   |
| Mobilisation     | 0.000  | 0   | 136.000 | 36  |
| Total :          | 24.000 | 100 | 373.000 | 100 |

#### Time Cause/Reason Analysis

|              | Period | (%) | Survey  | (%) |
|--------------|--------|-----|---------|-----|
| Production   | 9.383  | 39  | 84.050  | 23  |
| Weather      | 13.983 | 58  | 65.733  | 18  |
| Equip.Fail   | 0.233  | 1   | 6.150   | 2   |
| MOB/DeMOB    | 0.000  | 0   | 140.250 | 38  |
| Wside.Reg    | 0.000  | 0   | 35.950  | 10  |
| Crew Change  | 0.000  | 0   | 35.967  | 10  |
| PGS          | 0.000  | 0   | 3.000   | 1   |
| Survey Shape | 0.400  | 2   | 1.900   | 1   |
| Total :      | 24.000 | 100 | 373.000 | 100 |

#### Time Charge Analysis

|            | Period | (%) | Survey  | (%) |
|------------|--------|-----|---------|-----|
| Prime      | 7.133  | 30  | 57.750  | 15  |
| Operations | 2.250  | 9   | 26.300  | 7   |
| Standby    | 14.383 | 60  | 103.583 | 28  |
| Contractor | 0.233  | 1   | 45.117  | 12  |
| Mob/Demob  | 0.000  | 0   | 140.250 | 38  |
| Total :    | 24.000 | 100 | 373.000 | 100 |

### 3. TIME SUMMARY

November 1st, 2003

| Start   | End   | Hours  | Description / Comments   | Charge     |
|---------|-------|--------|--|------------|
| 00:00   | 13:59 | 13.983 | Weather (Weather)  | Standby    |
|         |       |        | Continue weather standby - prepare to continue acquisition on line 1092  |            |
| 13:59   | 14:13 | 0.233  | Equip.Fail (Instrument)  | Contractor |
|         |       |        | Missed SP 1001-1099 due to Spectra gun controller halt at SOL - reboot and continue down the line.               |            |
| 14:13   | 18:41 | 4.467  | Seq 014 : Line WO3ANT-1092P1   | Prime      |
|         |       |        | SP 2112-2210 edited to be reshot - Syntrak on-line recording system halt - rebooted and continued down the line. |            |
| 18:41   | 20:56 | 2.250  | Production (Line Change)   | Operations |
| 20:56   | 21:20 | 0.400  | Survey Shape (Extended L/C)  | Standby    |
|         |       |        | Tear drop turn at end of line due to line restrictions.  |            |
| 21:20   | 24:00 | 2.667  | Seq 015 : Line WO3ANT-1164P1   | Prime      |
| Total : |       | 24.000 |  |            |

### Chase/Supply Vessel Status:

Southern Salvor on site. Perfect Lady moved to Port Fairy during rough sea conditions.

### Comments/Problems:

Ran a set of monthly tests on all streamers prior to continuing acquisition – one module failed the harmonic distortion test on streamer 2 - channels 265-276 were affected. Due to weather and sea state at the time it was not possible to change this module till conditions improve. To recover the source and streamer to replace the module could take at least 12-15 hours of production time.

This will be monitored and replaced at the first opportunity, or when it is possible to launch the work-boat. Unable to launch the work-boat to record a TS dip for navigation water velocity checks.

At SOL 1092 – gun-controller hangup missed sp 1001 TO 1099.

Missed SP 2212-2210 due to Syntrek recording system on-line hang-up. Rebooted and continued.

Line 1164 the front end of streamer 4 began running very deep down to 12 metres on the front 5 depth controllers. This area had been rebalanced prior to restarting acquisition. The area and traces involved will have to be edited from the final data and the streamer will be recovered at the end of the current line 1164, heading 305°. Time to complete repairs and start shooting again is estimated at 8-10 hours.

### Cetacean Report:

No sightings reported. A specific watch from the Bridge with dedicated observer was conducted one hour prior to initialising the source at the commencement of acquisition after a period of weather standby. Soft start procedures for the source arrays are in place on all lines.

### Weather Comments:

Start of the period on continuing weather standby – winds reached 25-40 knots at times. Sea and swell approaching 4 metres at times but slowly appeared to improve. A number of tests at different cable depths were made to try to ascertain swell noise effects and acceptability prior to continuing acquisition and getting started at the earliest possible time. Gradually conditions improved and acquisition was able to continue. Forecasts indicate reasonable weather for the next 2 days – hopefully once streamer 4 is corrected we should be able to continue.

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

Continuing acquisition on line 1164, heading 305° - fair weather, moderate swell. Problems with cable 4 balance at the front end. Will have to recover at the end of line. Trace editing will be required. Running down to 12 metres at times.

| SEQ                           | COMMENTS   |
|-------------------------------|--|
| <b>014</b><br><b>Dir 125°</b> | <p><b>W03ANT1092 P1 SP 1099 – 2836 Incomplete</b></p> <p>Data Tape Nos: 35656 – 35662 Tapes 35659 – 35660 NOT TO BE PROCESSED</p> <p>Missed SP 1001-1099 due to Spectra Gun Controller hangup at SOL – reboot and continue down the line.</p> <p>Miss SP 2112-2210 Syntrek crash on-line – reboot and continue down the line. To be reshot.</p> <p>Moderate to strong bursts of swell noise observed along this line. Erratic cable depths.</p> <p>Weather: Winds W 10 knots , Sea and Swell: SW up to 2.0-3.0 metres at times.</p> <p>Noise at SOL: 5-8µB, EOL: 5-8µB (6Hz lo-cut filter applied)</p> <p>Water Depth: SOL: 38m, EOL: 55.0m</p> <p>Feather at SOL: 1.5°, EOL : 0.7°, Max: 1.5°</p> <p>Streamer Depth: 8.5 metres acceptable depth control. Fair but some erratic behaviour in marginal conditions. Bird 1 streamer 2 max depth 11m. Bird 13 streamer 4 max depth 10.7 occasionally.</p> <p>SP 1900-1974 bird 9 on streamer 4 occasionally to 10.2m</p> <p>Noisy Traces: Nil logged – random moderate to strong swell bursts throughout the line.</p> <p>Streamer 2, channels 265-276 failed Harmonic Distortion Tests in Monthly Tests. Unable to replace module at this time due to sea and swell conditions.</p> <p>Streamer 2 channels 254, 247 failed daily tests – edit due to hydrophone leakage.</p> <p>Gun Volume SOL: 2500 , EOL: 2500. Good pressure and control. After 1<sup>st</sup> initial 100 SP's.</p> <p>Guns sequence changed on SP ranges 1100-1118, 1120-1134, 1136-1141</p> <p>Gun edits logged : – 4 spread errors above 2ms SP 1007,1560, 1612, 2666.</p> <p>Timing errors above 1.5ms: SP 1560, 1612, 2666</p> <p>Missed Shots: 1001-1099 and 2112-2210 both due to instrument and source controller problems.</p> |
| <b>015</b><br><b>Dir 305°</b> | <p><b>W03ANT1164P1 SP 2836 - 893 Incomplete – depth edits on cable 4.</b></p> <p>Data Tape Nos: 35663 - 35666</p> <p>Moderate bursts of swell noise observed along this line. Very erratic cable depths at head of cable 4.</p> <p>Weather: Winds E 8 knots , Sea and Swell: ESE up to 3.0 metres at times near the end of the line</p> <p>Noise at SOL: 7-8µB, EOL: 7-8µB (6Hz lo-cut filter applied)</p> <p>Water Depth: SOL: 56.1m, EOL: 37.0m</p> <p>Feather at SOL: 1.5°, EOL : 0.7°, Max: 1.5°</p> <p>Streamer Depth: 8.5 metres. Poor depth control - outer streamer 4. Depth controllers 3-7 running very</p>  |

|  |   |
|--|---|
|  | <p>deep and data will have to be edited for the affected traces.</p> <p>Noisy Traces: – random swell bursts throughout the line.</p> <p>Gun Volume SOL: 2500 , EOL: 2500. Good pressure and control.</p> <p>Gun edits logged : – 8 spread errors above 2ms SP 2634, 2060. 1524, 1222, 1188 1132, 1106, 988</p> <p>Timing errors above 1.5ms: 2634, 2060, 1524, 1222, 1188, 1106, 988</p> <p>Missed Shots/ No data records: SP 2756 to 2662, 2402 – 2274, 1711, 1172-1174</p> <p>Data Logger hangup between SP 2402-2274 – data on tape has been checked and verified as good.</p> |
|  |   |

### HSE Daily Statistics - 01/11/2003

#### 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 Audit and Inspection by Captain, PC and HSE Adviser - review audit findings.

#### HSE Items:

10:15 - 10:45 HSE Induction-Inspection [IT]  
HSE Inspection by Captain, HSE Adviser and Party Chief. Check on outstanding action points from last audit.

13:00 - 13:25 Toolbox Meeting/Debrief [TB]  
Toolbox meeting on Bridge to discuss communications and plans when approaching the Semac-1 at the end of line 1090

| Description                                | Day  | Nov  | 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    | 8      |
| Small Boat Launches ( )                    | 0    | 0    | 2      |
| Helicopter Landing/Takeoff (HL)            | 0    | 0    | 0      |
| MOB Drill (MD)                             | 0    | 0    | 0      |
| Fire Drill (FD)                            | 0    | 0    | 0      |
| Emergency Boat /Towing Drill (EBD)         | 0    | 0    | 7      |
| Safety Meeting (SM)                        | 0    | 0    | 2      |
| HSE Induction-Inspection (IT)              | 1    | 1    | 4      |
| Safety Committee Meeting (SCM)             | 0    | 0    | 0      |
| HSE Audits/Inspections/Safety Checks (HSE) | 0    | 0    | 5      |
| Toolbox Meeting/Debrief (TB)               | 1    | 1    | 12     |
| 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   | 35   | 556    |
| No. Seismic Crew                           | 22   | 22   | 340    |
| No. Contractors                            | 3    | 3    | 48     |
| No. Lost Time Injuries                     | 0    | 0    | 0      |
| Exposure Hours *                           | 720  | 720  | 11328  |
| Small Boat Hours (Decimal hours)           | 0.00 | 0.00 | 4.48   |
| Small Boat Exposure Hours (Dec. hours)     | 0.00 | 0.00 | 17.93  |
| Fuel Usage (Cubic Metres)                  | 11   | 11   | 166    |

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

Navigation report submitted by Stephen Burt for Saturday 01<sup>st</sup> November 2003

**Navigation General:**

**General:**

Checked the SPRINT findings and the following points have been noted.

The difference between the two transducers is known PGS have reported that the 33 KHz is faulty but the 210 KHz is operational. During this survey only the 210 KHz has been used due to the relatively shallow depths which is T1402 records in the P2 files the Header Record is defined as:

H1412 0.0 35.1 -5.5 1500.00 000 ATLAS DESO 25 210 KHz

As mentioned in the yesterdays report the crosschecks with the previous survey data have been good.

Please note an offset change was made on Sequence 005 after the nominal ranges were monitored during the initial lines. The corrected nominal Y range from the NRP to the Near Group is 305m as in the H2210 record it was initially 314m.

Observations made on the acoustic ranges between streamers 3 and 4 and noisy compass data are concurred on here.

Checked the raw P2-94 file for the reported missing shot points on Sequence 004 and all the reported missing data was in place in the CR file, unsure why the single line file passed to EDRH had the missing data.

The initial line shot after the period of poor seas and the port call was affected by seismic problems however all navigation systems were operational. The crew reported problems with the depth control on S4 during Sequence 015 that will probably result in having to recover the streamer to improve the ballast.

**Progress:**

Shot to Sequence: #014 Processed to Sequence #013 QC'd to Sequence #013

**NTBP Sequences:**

001

**Dead/Bad Units:**

RGPS: - All pods are operational.

Acoustics - All pods are operational.

Compasses – Operational

Regards,

*Ken Haig and Stephen Burt*

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