

Mini-SOSIE SEISMIC DATA ACQUISITION 2008

- MARYBOROUGH, QLD
-

FIELD OPERATIONS REPORT

Prepared for Blue Energy Limited

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Velseis Pty Ltd

ABN 56 009 809 544

83 Jijaws Street (PO Box 118) Sumner Park Qld 4074

Phone: +61 7 3376 5544 Fax: +61 7 3376 6939

Email: velseis@velseis.com.au

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1. INTRODUCTION

1.1 GENERAL

Blue Energy Limited contracted Velseis Pty Ltd of Brisbane, to conduct seismic data acquisition in the Maryborough area, employing the Mini-SOSIE energy source.

Blue Energy was responsible for permitting and traffic management, and to arrange any necessary line preparation whilst Velseis sub-contracted and managed surveying.

2. MARYBOROUGH SURVEY

2.1 GENERAL

The recording program was conducted at the following site:

Twenty kms northwest of Maryborough from November 3 to 16, 2008

Three lines were recorded with a combined total length of 25.26 kms. Source point and geophone spacing were 10m.

No lost time or restricted work injuries were recorded during the duration of the programme.

2.2 TERRAIN/WEATHER

All lines were along public roads therefore a major focus was on safe work practices in a traffic environment.

The weather during the recording period was fine and dry allowing steady production for the duration of the project.

2.3 LOGISTICS

All equipment was mobilised from Brisbane and incidentals were procured in Maryborough. External support was not required due to the very short nature of the survey

2.4 ACCOMMODATION

The crew was accommodated locally.

2.5 COMMUNICATIONS

Field communications for all phases of the field work were by VHF radio (both vehicle mounted and hand held) using Velseis' discrete frequencies.

CDMA and GSM mobile phone coverage was available over much of the site.

Communications between the field crew and Brisbane office were available by telephone and by Internet (from the accommodation, and by wireless network from the Dogbox).

2.6 PERMITTING/SURVEYING/LINE PREPARATION/REHABILITATION

Permitting and landholder liaison were carried out by Blue Energy.

Surveying services were provided by Klau Geomatics, whose office is in Sydney. Geophone stations were marked by survey pegs, at 10m intervals.

The Recording Crew removed survey markers after completion of recording.

2.7 RECORDING OPERATIONS

2.7.1 GENERAL

Recording operations began on November 4th, and recording production continued until November 14th, with 25kms of line being covered.

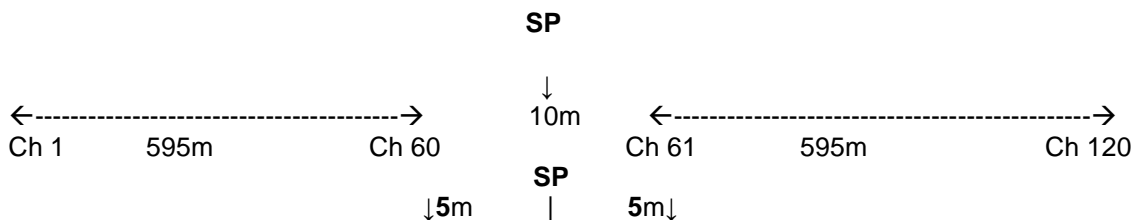
2.7.2 RECORDING PARAMETERS

Recording parameters were developed with due regard to both geological targets and survey costs. A nominal CDP coverage of 60 fold was proposed, to ensure that data quality was maintained despite possible changes in geological conditions and target depth.

The spread was symmetrical about the shot point. For each record, 120 live channels were recorded, i.e. 60-0-60 split spread. Near offset = 5m; Far offset = 595m.

A 10m geophone station interval was chosen.

2.7.3 SPREAD GEOMETRY



2.7.4 INSTRUMENT PARAMETERS

| | |
|--------------------------------|-----------------------------|
| Number of recording channels | 120 |
| Auxiliary channel 1 | N/A |
| Auxiliary Channel 2 | N/A |
| Sample rate | 1.0 ms |
| Record length | 1.0 second |
| Filters: High Cut (anti alias) | 375 Hz, 72 dB/oct |
| Low cut | 40 Hz, 12dB/oct |
| Recording media/format | IFP.SEG-Y |
| Archive/format | EXTERNAL HARD DRIVE (SEG-Y) |

2.7.5 SOURCE PARAMETERS

| | |
|-----------------------------|--|
| Mini-SOSIE | 65Kg Wacker Rammer |
| Number of units | 1 |
| SP interval | 10m |
| Array length | 1 single wacker centred between stations |
| Record length (listen time) | 1 second |
| CDP coverage (nominal) | 60 fold |

2.7.6 RECEIVER PARAMETERS

| | |
|--------------------------|--------------------------------------|
| Geophone Arrays | 300 |
| Geophone group interval | 10m |
| Geophone stringing array | 6 elements in line over 5m, 1m apart |
| Array layout | 5m |
| Array centre | on station |
| Element | Sensor SM-7, 30Hz |

2.7.7 RECORDING SYSTEM TYPE

The recording system utilised for this survey was a VELCOM 358/368

2.8 HEALTH, SAFETY AND ENVIRONMENT

Velseis Pty Ltd has developed a comprehensive Safety management System, which has been mapped against the requirements of the Occupational Health and Safety Act.

Morning toolbox meetings, convened by Clint Mackenzie, were held each day, prior to driving to the work site. These meetings ran for a typical period of 15-20 minutes, and provided a forum for personnel to discuss operational and safety aspects of the survey.

Velseis' Fitness for Work procedures were also administered at this time, including random breath testing. Copies of inductions, toolbox meeting records and details of topics discussed, have been archived at Velseis' Brisbane office.

2.9 PERSONNEL AND SAFETY STATISTICS

Nine personnel were on the field crew each operational day. No lost time or restricted work injuries were recorded.

3. APPENDICES

APPENDIX A: PERSONNEL

2 D SEISMIC RECORDING CREW

| | |
|-------------------|-----------------------|
| Clint Mackenzie | Observer/Crew Manager |
| Brendan Davies | Line Supervisor |
| Joshua Large | Wacker Operator |
| Manda Plumridge | Line Crew |
| Kieran Ryan | Line Crew |
| Nathan Gunter | Line Crew |
| Julieanne Gunter | Line Crew |
| Samantha Jeffries | Line Crew |
| Damien Wolski | Line Crew |

APPENDIX B: VEHICLES

Line vehicles

| | | |
|----------------------------|---|---|
| Recording vehicle | 1 | Mitsubishi Canter 4 x 4, 3 tonne Truck with air conditioned cab |
| Spread movement & checking | 3 | Toyota Land Cruiser 4 x 4 tray-backs |
| Service/personnel t'port | 1 | Toyota Hi-Lux 4 x 4 Crew Cab |

APPENDIX C: PRODUCTION RECORDING SUMMARY

| Blue Energy Maryborough - Recording Summary Job A337 - 2D Mini-SOSIE Seismic Survey | | | | | | |
|---|------------------|----------------|-----|----------------|--------|--|
| Observer: Clint Mackenzie | | | | | | |
| DATE | PROD (per hr) | STBY (hour) | RDO | Total shots | Line | REMARKS |
| 3/11/08 | | | | | | Mobilisation – Brisbane to Maryborough |
| 4/11/08 | 8.25 | 0.25 | | 112 | Line 2 | Shooting Line 2. Downtime - checking spread. |
| 5/11/08 | 10.25 | 0.25 | | 230 | Line 2 | Shooting Line 2. |
| 6/11/08 | 9.75 | 0.25 | | 255 | Line 2 | Continued shooting . |
| 7/11/08 | 8.25 | 0.25 | | 27 | Line 2 | Finished Line 2 moved to Line 3. |
| | | | | 90 | Line 3 | Shoot spread problems in the afternoon. |
| 8/11/08 | 7.25 | 0.25 | | 129 | Line 3 | Shooting on line 3 down time due to bad boxes and psu's and cables. |
| 9/11/08 | 10.25 | 0.25 | | 341 | Line 3 | Spread problems appear to be sorted. |
| 10/11/08 | 10.25 | 0.25 | | 324 | Line 3 | Continued shooting . |
| 11/11/08 | 8 | 2.5 | | 164 | Line 3 | Windy day with showers of rain. |
| 12/11/08 | 6.5 | 4 | | 181 | Line 3 | Finished line 3 moved equipment to line 1. Line 1 deemed too unsafe by myself and agreed by client decided start line at stn 210. Traffic control set up and we started to lay equipment. Public vehicles failed to slow enough to make it safe to continue. Stopped work till we could devise a plan to make it safe to continue. |
| 13/11/08 | 9.25 | 1 | | 154 | Line 1 | Slow going with re shoots for extremely bad shots. Waited on traffic control to set up new work areas as we moved spread. Another traffic control person was requested to speed up this process. |
| 14/11/08 | 9.75 | 0.25 | | 292 | Line 1 | Finished Line 1 and packed up. some re-shoots due to extremely poor data. |
| 15/11/08 | | | 1 | | | RDO |
| 16/11/08 | | | | | | Demobe from Maryborough to Middlemount |
| | 97.75 | 9.5 | 1 | 2299 | | |