



KAROON GAS 2005 SEISMIC SURVEY KORUMBURRA 2D



OPERATIONS REPORT FOR KAROON GAS OCTOBER-NOVEMBER 2005

BY

M.G.KNEIPP

OF

**TERREX SEISMIC
U2 / 37 HOWSON WAY
BIBRA LAKE
WESTERN AUSTRALIA 6163**

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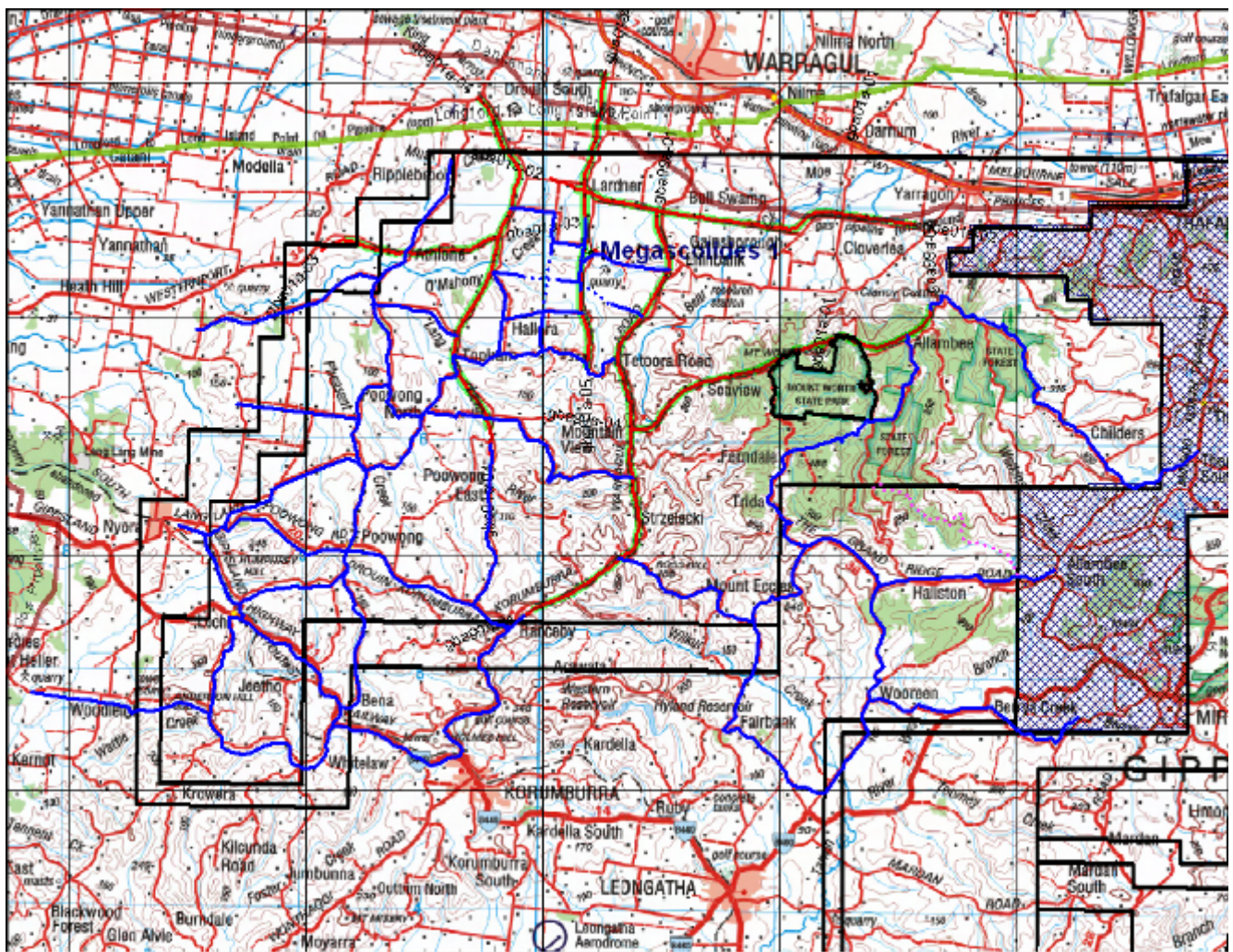
1. INTRODUCTION

Terrex Seismic was contracted by Karoon Gas to conduct the Korumburra 2D seismic survey in the Gippsland area of Victoria. The contract consisted of 22, 2D lines with a total of 255.4 kms to be recorded.

1.1 GEOGRAPHICAL AREA

The prospect was located approximately 20 – 50 south/southwest of Warragul, in the Gippsland region of Victoria.

The country mainly consisted of farmland, with some forestry in areas.



Korumburra 2D Location Map

1.2 WEATHER

The weather varied from day to day during the Korumburra 2D, 17 of the 31 days on prospect involved some form of precipitation. Most falls were passing showers, however some falls were enough to delay acquisition on some lines until a later date. The climate remained pleasantly cool over the duration of the job.

1.3 LOGISTICS

Acquisition commenced on the 10th October 2005 on PEL 106 after mobilizing from Broken Hill in NSW on the 6th November. Acquisition was completed on the 8th November 2005. All equipment was mobilised from Broken Hill to Yarragon, a distance of approximately 980 km by Terrex personnel beginning on the 6th November 2005, arriving by 5.00 p.m. the following day.

Access to the lines was via local roads and farm tracks.

The accommodation for the crew was provided by the Yarragon Motel and Yarragon Bed and Breakfast.

The Site office was situated in the Yarragon Hotel; the mechanical and cable repair workshop was situated in Warragul, 13 km east of Yarragon.

Meals were provided by the Yarragon Hotel.

Fuel for all vehicles was supplied by Shell Coles Express of Trafalgar.

All other logistics were supported out of Terrex Seismic Perth Office.



Traffic Control on line GKG05-12

2. SURVEYING

2.1 RANGING / CHAINING / SURVEYING

Line chaining and survey for the entire program were completed by Dynamic Satellite Surveys personnel; as lines were roadside, additional line preparation was not required.

2.2 TRAFFIC CONTROL

Traffic control for surveying and acquisition was sub contracted to Able Traffic Management.

2.3 PERMITTING

Permitting was carried out by Mr. Tom Pickett and Mr. Mike Walcott. Tom was also the client representative on site for the entire contract.



Laying Cable on line GKG05-12

3. RECORDING / PROCESSING

3.1 RECORDING PARAMETERS

Acquisition Type:	Sercel 388 - 24 Bit Telemetry System
Energy Source:	3 x Input-Output 42,000lb Peak Force 6x6 Truck mounted Vibrators Online
Vibrator Point Interval:	12 metres
Vibrator Array:	12 m Pad-Pad / No Moveups
Vibrator Array Location:	Centred -3.0m before the VP Peg (ie VP 100 is centred at VP 99.75)
Receivers:	6 x 10 Hz SM24 Geophones / Group
Receiver Interval:	12 metres
Receiver Array:	6 metres (6 phones with 1.0m phone spacing)
Receiver Array Location:	Centred +3.0m from the Station Peg in direction of line layout (ie Centered at SP 100.25)
Sweep Length:	6.0 sec
Number of Sweeps:	2
Sweep Type:	Monosweep or Varisweep
Sweep Frequencies:	5 – 80Hz (dependent on field tests)
Sweep Taper:	200 msec Taper
Sweep Energy per Km:	1000 sec/km
Sweep Control:	Pelton Advance 2 Model 5
Accelerometers:	Pelton M5 High Performance
Similarity System:	Pelton VIBRA-SIG
Peak Force:	44000 lbs
Hold Down Weight:	44200 lbs
Vibrator Drive Level:	Force Control On - 80% Peak Force
Phase Lock:	Ground Force Phase Lock
No. of Channels:	360 Channels
Spread Geometry:	Symmetric Split Spread
Maximum Offset:	2154-6-0-6-2154 metres
Fold:	180 Fold with 6m CDP interval (or 360 Fold with 12m CDP Bins)
Record Length:	5.0 seconds
Correlation Sample Rate:	2 milliseconds
Written to Tape S.R.:	2 milliseconds
Output Data Format:	SEG D

3.2 RECORDING KORUMBURRA 2D

The first production profile was recorded on line GK05-02 on the 10th October. Acquisition began at 0620 after the completion of wirelines and testing on the 9th October.

Line GK05-02 - Lardeners Track/Hunters Lardeners Track

Recording commenced on this line on the 10th October from station 100 in the north and was completed the same day at station 420 in the south, a total of 3.840 km. 30 stations were skipped due to terrain and houses

Line GK05-05 - Sheehan Road

Recording commenced on this line on the 10th October from station 100 in the east and was completed the following day at station 387 in the west, a total of 3.444 km. 38 stations were skipped due to bridges and houses

Line GK05-06 - Brock Road

Recording commenced on this line on the 11th October from station 100 in the south and was completed the same day at station 446 in the north, a total of 4.152km. 22 stations were skipped due to bridges and houses

Line GK05-10 – Lang Lang Park Road

Recording commenced on this line on the 11th October from station 100 in the east and was completed the same day at station 439 in the west, a total of 4.068km. 18 stations were skipped due to bridges, houses and a school.

Line GK05-09 – Lyons Road/Clifton Road

Recording commenced on this line on the 12th October from station 100 in the east and was completed the same day at station 827 in the west, a total of 8.724 km. 31 stations were skipped due to bridges and houses.

Line GK05-11 – Cochrane's Road

Recording commenced on this line on the 13th October from station 100 in the west and was completed the same day at station 532 in the east, a total of 5.184 km. 76 stations were skipped due to bridges, houses and dairy sheds.

Line GK05-12 - Timms Road

Recording commenced on this line on the 13th October from station 100 in the south and was completed the following day at station 649 in the north, a total of 6.588 km. 63 stations were skipped due to bridges, houses and dairy sheds.

Line GK05-15 - Drouin Poowong Rd/Omeras Rd/Stanfield Road/Mountain View Road

Recording commenced on this line on the 14th October from station 100 in the west and was completed the following day at station 1314 in the east, a total of 14.556 km. 159 stations were skipped due to bridges, houses, dairy sheds and a wet paddock

Line GK05-07 - Toorwood–Topiram Rd/Lardeners-Hunters Rd

Recording commenced on this line on the 15th October from station 100 in the east and was completed the following day at station 829 in the west, a total of 8.76 km. 39 stations were skipped due to a large hand carry section and houses.

Line GK05-08 – Druin–Poowong Rd, Loch–Poowong Rd, Bass Valley Rd, South Gippsland Highway, Bena–Kongwak Rd, Jeetho West Rd, Wonthaggi–Loch Rd, Colliers Rd

Recording commenced on this line on the 16th October from station 100 in the west and was completed on Oct 21st at station 3740 in the east, a total of 43.5 km. 450 stations were skipped due to Houses, Bridges, the town of Poowong and various hand carry sections.

Line GK05-13 – Pattersons-Ferriers Rd, Ferriers Rd, Mtyall Rd, North Poowong Rd

Recording commenced on this line on the 21st October from station 100 in the north and was completed on the 23rd Oct at station 1550 in the south, a total of 11.6 km. 248 stations were skipped due to houses and the village of Loch.

Line GK05-16 – Main South Rd

Recording commenced on this line on the 23rd October from station 100 in the east and was completed the following day at station 924 in the west, a total of 9.7 km. 59 stations were skipped due to houses.

Line GK05-14 - Lang Lang–Poowong Rd, Drouin–Poowong Rd

Recording commenced on this line on the 24th October from station 100 in the east and was completed the following day at station 1515 in the west, a total of 16.9 km. 227 stations were skipped due to houses, culverts and the town of Poowong.

Line GK05-17 – South Gippsland Hwy, Holmes Rd, Korumburra–Warragul Rd

Recording commenced on this line on the 25th October from station 100 in the west and was completed the 29th Oct at station 2235 in the east, a total of 25.5 km. 350 stations were skipped due to houses, culverts, bridges, railway and unsafe sections on the Gippsland Hwy.

RECORDING Contd.

Line GK05-19 – Ross Witherdons Rd, Wild Dog Valley Rd, Amietts Rd, Mt Eccles Rd

Recording commenced on this line on the 30th October from station 100 in the west and was completed the following day at station 1250 in the east, a total of 13.6 km. 80 stations were skipped due to houses etc.

Line GK05-22 – Grand Ridge Rd

Recording commenced on this line on the 31st October from station 100 in the west and was completed 2nd November at station 1100 in the east, a total of 12.0 km. 67 stations were skipped due to houses etc.

Line GK05-21 – Strezeleki Hwy, Leongatha–Yarragon Rd, Grand Ridge Rd, Seymour Tk, Allens Rd, Allambee Rd

Recording commenced on this line on the 2nd November from station 100 in the east and was completed the following day at station 820 in the west, a total of 8.7 km. 126 stations were skipped due to houses etc.

Line GK05-20 – Leothanga-Yarragon Rd, Canavans Rd, Mt Eccles Rd, Wild Dog Valley Rd, Leongatha Rd, Strezeleki Hwy

Recording commenced on this line on the 3rd November from station 100 in the south and was completed the 6th November at station 2656 in the north, a total of 26.9 km. 240 stations were skipped due to houses, well site and hay paddocks.

Line GK05-01 – Blazers Tk, Hunters Tk, Lardners Tk, Rule Rd

Recording commenced on this line on the 6th November from station 100 in the east and was completed the same day at station 493 in the west, a total of 6 km. 99 stations were skipped due to hay paddocks.

Line GK05-03 – Simpson Rd, Hick Rd

Recording commenced on this line on the 7th November from station 100 in the north and was completed the same day at station 677 in the south, a total of 8 km. 125 stations were skipped due to houses, paddocks, sheds and wet terrain.

Line GK05-04 - Allen Road, Brown Road

Recording commenced on this line on the 7th November from station 100 in the west and was completed the following day at station 688 in the east, a total of 7.0 km. 286 stations were skipped due to wet terrain in paddocks.

The completion of line GK05-04 concluded acquisition on the Korumburra 2D seismic survey, a total of 18460 VP's, 2833 skipped stations due to terrain and various other obstacles and 255.456 kms recorded.



A handcarry section on line GKG05-07

3.3 PROCESSING

All data 'A' tapes were sent to Western Geco in Perth for final processing while the data 'B' tapes were sent to were sent to Karoon Gas head office.

APPENDIX A

EQUIPMENT SPECIFICATIONS

SEISMIC ACQUISITION CREW - EQUIPMENT

RECORDING EQUIPMENT, SOURCE EQUIPMENT AND VEHICLES

3.1.1 RECORDING EQUIPMENT

- **SERCEL 388 - 24 Bit 3D Seismic Data Acquisition System**
 - Sun Monitor and Sun Sparc 5 Computer
 - OYO DFM 480 Plotter, UPS, LIM
 - One (1) Sercel Real Time APM - Sweep Correlator
 - Two (2) Fujitsu 3490 Tape Drives
 - One Hundred and Ten (110) SU6 Telemetry units (660 Channels)
 - Two Hundred and Twenty (220) 3 T/O Seismic Cables (660 Channels)
 - Twenty (20) Sercel PSUs and Four (4) Sercel CSUs
 - Six (6) CSU Patch Cables
 - Twenty (20) Battery case power Cords
 - Forty (40) Batteries for SU6 Units
 - One (1) Sercel Handheld Cable Testers
 - Four (4) Sercel Battery Chargers
- **Pelton Vibra Sig Real Time Similarity System**
- One (1) 10 metre 6 DB Boost High Gain Antenna on Recording Truck
- **Sensor SM24 10Hz High Specification Geophones**
- Nine Hundred (900) Geophone strings with 6 ph/group (900 Channels with 6 phones/group)
- One (1) Sensor SMT100 Geophone Tester

Note: Terrex Seismic warrants that 90% of equipment will be used in field and up to 10% may be undergoing repair and maintenance.

3.1.2 SOURCE EQUIPMENT

- **Four (4) HEMI 44 6x6 Truck mounted Vibrators:**
 - Peak force is 44000lbs per Vibe and
 - Hold-Down weight is 44200lbs per Vibe
- **Four (4) Pelton Advance 2 Model 5 Vibrator Control Electronics**
- One (1) Pelton Encoder Sweep Generator for Recorder
- Three (3) operating Online and One (1) on Standby
- Electronics are capable of Trade Marked **Varisweep**

APPENDIX B

OCCUPATIONAL HEALTH AND SAFETY STANDARDS

- ❖ Crew startup induction / safety meeting
- ❖ Sunday crew safety meeting
- ❖ Long sleeve shirts and covered footwear must be worn by field crew at all times
- ❖ Sunscreen
- ❖ Reflective vests for all recording personnel working along roads
- ❖ Satellite Phone in recorder
- ❖ Functional UHF Radio fitted in all line vehicles
- ❖ Random drug and alcohol tests
- ❖ Vehicles fitted with First Aid kits
- ❖ Line Vehicles fitted with flashing beacons
- ❖ Road Signs
- ❖ Gloves to protect hands

APPENDIX C

TAPE LISTING

Tape #	Line #	First FFID	Last FFID	First VP	Last VP	Date Recorded
1A	KG05-02	1	90	100.5	238.5	9-Oct-05
2A	KG05-02	91	380	100.5	420.5	10-Oct-05
3A	KG05-05	381	635	104.5	387.5	10-11-Oct
4A	KG05-06	636	959	100.5	446.5	11-Oct-05
5A	KG05-10	960	1281	100.5	439.5	11-Oct-05
6A	KG05-09	1282	1523	100.5	341.5	12-Oct-05
7A	KG05-09	1524	1722	342.5	548.5	12-Oct-05
8A	KG05-09	1723	1983	549.5	827.5	12-Oct-05
9A	KG05-11	1984	2257	100.5	439.5	13-Oct-05
10A	KG05-11	2258	2341	440.5	532.5	13-Oct-05
11A	KG05-12	2342	2577	101.5	360.5	13-Oct-05
12A	KG05-12	2578	2835	361.5	649.5	14-Oct-05
13A	KG05-15	2836	3115	100.5	467.5	14-Oct-05
14A	KG05-15	3116	3287	468.5	663.5	14-Oct-05
15A	KG05-15	3288	3521	664.5	902.5	15-Oct-05
16A	KG05-15	3522	3685	903.5	1098.5	15-Oct-05
17A	KG05-15	3686	3891	1099.5	1314.5	15-Oct-05
18A	KG05-07	3892	4165	100.5	403.5	15-16-Oct
19A	KG05-07	4166	4405	404.5	643.5	16-Oct-05
20A	KG05-07	4406	4585	644.5	829.5	16-Oct-05
21A	GKG05-08	4586	4764	100.5	305.5	16-Oct-05
22A	GKG05-08	4765	4996	306.5	535.5	17-Oct-05
23A	GKG05-08	4997	5226	536.5	815.5	17-Oct-05
24A	GKG05-08	5227	5405	816.5	1000.5	17-Oct-05
25A	GKG05-08	5406	5629	1001.5	1247.5	18-Oct-05
26A	GKG05-08	5630	5800	1248.5	1429.5	18-Oct-05
27A	GKG05-08	5801	6030	1430.5	1735.5	18-Oct-05
28A	GKG05-08	6031	6220	1736.5	1934.5	18-Oct-05
29A	GKG05-08	6221	6444	1935.5	2162.5	19-Oct-05
30A	GKG05-08	6445	6674	2163.5	2425.5	19-Oct-05
31A	GKG05-08	6675	6846	2426.5	2710.5	19-Oct-05
32A	GKG05-08	6847	7070	2711.5	2948.5	19-Oct-05
33A	GKG05-08	7071	7301	2949.5	3184.5	20-Oct-05
34A	GKG05-08	7302	7530	3185.5	3425.5	20-Oct-05
35A	GKG05-08	7531	7636	3426.5	3552.5	20-Oct-05
36A	GKG05-08	7637	7786	3553.5	3740.5	21-Oct-05
37A	GKG05-13	7787	8068	100.5	419.5	21-Oct-05
38A	GKG05-13	8069	8211	420.5	690.5	21-Oct-05
39A	GKG05-13	8212	8435	691.5	936.5	22-Oct-05
40A	GKG05-13	8436	8627	937.5	1146.5	22-Oct-05
41A	GKG05-13	8628	8858	1147.5	1400.5	22-Oct-05
42A	GKG05-13	8859	8984	1401.5	1550.5	23-Oct-05
43A	GKG05-16	8985	265	100.5	405.5	23-Oct-05
44A	GKG05-16	266	495	406.5	658.5	23-Oct-05

45A	GKG05-16	496	752	659.5	924.5	23-Oct-05
46A	GKG05-14	753	1032	100.5	390.5	24-Oct-05
47A	GKG05-14	1033	1262	391.5	656.5	24-Oct-05
48A	GKG05-14	1263	1370	657.5	897.5	24-Oct-05
49A	GKG05-14	1371	1594	898.5	1126.5	25-Oct-05
50A	GKG05-14	1595	1767	1127.5	1315.5	25-Oct-05
51A	GKG05-14	1768	1942	1316.5	1515.5	25-Oct-05
52A	GKG05-17	1943	2212	100.5	455.5	25-Oct-05
53A	GKG05-17	2213	2434	456.5	717.5	26-Oct-05
54A	GKG05-17	2435	2664	718.5	955.5	26-Oct-05
55A	GKG05-17	2665	2876	956.5	1218.5	27-Oct-05
56A	GKG05-17	2877	3098	1230.5	1554.5	28-Oct-05
57A	GKG05-17	3099	3246	1555.5	1726.5	28-Oct-05
58A	GKG05-17	3247	3476	1727.5	1956.5	28-Oct-05
59A	GKG05-17	3477	3735	1957.5	2235.5	28-Oct-05
60A	GKG05-19	3736	4007	100.5	416.5	30-Oct-05
61A	GKG05-19	4008	4237	417.5	655.5	30-Oct-05
62A	GKG05-19	4238	4459	656.5	877.5	30-Oct-05
63A	GKG05-19	4460	4689	878.5	1133.5	31-Oct-05
64A	GKG05-19	4690	4806	1134.5	1250.5	31-Oct-05
65A	GKG05-22	4807	5010	100.5	320.5	31-Oct-05
66A	GKG05-22	5011	5232	321.5	552.5	1-Nov-05
67A	GKG05-22	5233	5319	553.5	652.5	1-Nov-05
68A	GKG05-22	5320	5535	653.5	895.5	1-Nov-05
69A	GKG05-22	5536	5740	896.5	1100.5	1-Nov-05
70A	GKG05-21	5741	6020	100.5	398.5	2-Nov-05
71A	GKG05-21	6021	6253	399.5	710.5	2-Nov-05
72A	GKG05-21	6254	6338	711.5	820.5	3-Nov-05
73A	GKG05-20	6339	6559	100.5	300.5	3-Nov-05
74A	GKG05-20	6560	6781	301.5	589.5	4-Nov-05
75A	GKG05-20	6782	7011	590.5	846.5	4-Nov-05
76A	GKG05-20	7012	7241	847.5	1075.5	4-Nov-05
77A	GKG05-20	7242	7463	1076.5	1329.5	4-Nov-05
78A	GKG05-20	7464	7693	1330.5	1594.5	5-Nov-05
79A	GKG05-20	7694	7923	1595.5	1867.5	5-Nov-05
80A	GKG05-20	7924	8100	1868.5	2060.5	5-Nov-05
81A	GKG05-20	8101	8352	2061.5	2320.5	6-Nov-05
82A	GKG05-20	8353	8383	2321.5	2358.5	6-Nov-05
83A	GKG05-01	8384	8663	100.5	413.5	6-Nov-05
84A	GKG05-01	8664	8781	414.5	564.5	6-Nov-05
85A	GKG05-03	8782	54	100.5	415.5	7-Nov-05
86A	GKG05-03	55	162	416.5	563.5	7-Nov-05
87A	GKG05-03	163	327	567.5	770.5	7-Nov-05
88A	GKG05-04	328	591	100.5	493.5	7-Nov-05
89A	GKG05-04	592	631	647.5	686.5	8-Nov-05

APPENDIX D

MONTHLY INJURY SUMMARY

Safety Statistics

Safety Statistics

Terrex Seismic Man-hours	10,524
Sub-Contractor Man-hours	3,240
Fatalities	0
LTI	0
MTI	4
First Aid / Medical Cases	7
Incident / Accident Reports	1
Hazard Identification Reports	17
Training Hours	39
Tool Box / Safety Meeting Man-hours	261
Audits / Inspections	380
Drills	0
Land Spills (< 5 litres)	0

Medical Statistics

Clinic Attendance	
Colds, Influenza type infections	0
Eye Irritation	0
Wound care, lacerations, dressings	0
Skin Irritations	0
Stomach & Digestion	1
Muscular / Skeletal / Soft Tissue	1
Bites and Stings	2
Miscellaneous	3
TOTAL	5

Remarks

Report compiled by: Nicky Byrne - HSE Advisor

APPENDIX E

SAFETY MEETING

Date: 11 October 2005
Location: Korumburra 2D
Crew: 401
Client: Karoon Gas
Conducted by: Nicky Byrne
Attendance: All
Meeting opened: 6.15 am
Meeting closed: 6.40 am

ACTION POINTS PREVIOUS MEETING

1. Rob to raise sirenas on cable trucks – Awaiting on sheets of metal that has been ordered
2. New wiper blades to be fitted to vehicles that need them

TOPICS DISCUSSED

Nicky Byrne (HSE Advisor)

- Greg and Brett are joining us today in addition to Joe and Daniel. They are from Able Traffic Management. We will now be able to keep a two man traffic control team with the vibes at all times. The lead vibe Operator has a UHF radio to communicate with the traffic controller team. One traffic control person will stay with front crew and one traffic control man with the back crew. The traffic controllers staying with the vibes will continue their traffic shadow plan as they have been doing. The traffic controller up the front and down the back will operate their stop and go sign behind each crew on the same side of the road the crew is working on. The front and back crews will have a UHF handheld which should be carried by the front person. This person will communicate with the traffic controller positioned at the rear of the crew.
The traffic controllers will stay in view of the traffic in cases where there is a blind corner or a hill. They will stop the traffic and let them know there are workers ahead and to take extreme caution. The front and back crew persons who will have the hand held radio will need to look out for the oncoming traffic and communicate with the traffic controller at the rear if any oncoming vehicles are coming towards him. Especially if there is a vehicle travelling too fast.
- Yesterday on Line 02, Lardners Rd there was a near miss involving a milk tanker who had come around a blind corner too fast, saw the stop sign and the vibes and suddenly locked on his brakes. This caused his truck trailer to slide slightly across the other side of the road then back on the correct side coming to a halt 100m up the road. The truck stopped after the stop sign but before the front vibe truck. The truck driver claimed he did not see any warning signs. On line 02 there are warning signs for approximately six kilometres and on all side roads with repeater warning signs along the stretch of the road. Signage was not the problem, speed and driver error on behalf of the truck driver was at fault. We need to be extra careful communicate with each other.
With Greg and Brett following front and back crew everyone will be in a controlled environment.

- I need everyone to communicate to each other when they see a team mate doing something unsafe or something that could be done safer. For example if you see one of our vehicles pull up on the side of the road on a blind spot, please call up on the two way and tell them to move up somewhere safer, it is too dangerous to park there. If you see one of our team mates get out of the vehicle and leave their door open. Remind them to close it as it could cause a vehicle to cross onto the other side of the road to avoid the car door causing an accident or you could loose the door.
- Try to limit U-turns as much as possible. Front and back would not be spotting out many sets so it would be safer to walk towards the vehicle rather than doing a U-turn to pick your crew up only a few meters back.

Greg (Able Traffic Management)

- We will be following behind the line crew teams as mentioned. Once the back line has finished the traffic team will then go and collect the signs at the rear and take them up the front to the next line. Once the signs have been laid out up the front the traffic team will return to their positions. So we will work in with you guys but will need to allow time to pick up and set out the signs. When there is traffic coming towards you we will stop the vehicle and warn them that there are workers on the road. If you see any vehicles that are being driving recklessly or dangerously inside your work zone try and get their plate number. We will write up an incident report and hand it on to the appropriate people.

Tom Pickett (Client Representative)

- When you do a line change you need to give the traffic crew half hour notice so that they can set up the road signs for your work area. That way you won't be sitting up the front waiting for them.
- I spoke to all the dairy transports yesterday. I re-emphasise where we are working. They have maps. It may take a couple of days for them to understand how we operate. The traffic Management team is there to control your work area.

John Phillipson (Vibe Technician)

- Yesterday there was vehicle congestion in one area down the back. To help ease this situation, I suggest the Management 100 series be used as a back crew wagon and take the two vehicles used for back crew off the line.

Mark Kneipp (Party Manager)

- Does anyone need a raincoat please come and see me.
- Steve Tobin, Terrex's managing director will be arriving this afternoon. Nik Helme our junior observer will be arriving tonight. He will most likely be doing a bit of observing and trouble shooting.
- For re-fuelling your vehicles the shell card is kept behind the counter in a Terrex yellow envelope. You need to punch in the pin number and sign the receipt which will go back into the yellow envelope with the fuel card.
- Safety related please use your common sense and play it safe.

Frank Whitehead (Observer)

- I have been picking up a bit of interference on channel one so we will operate on channel two from today.

MEETING CLOSED.

ACTION POINTS
<ol style="list-style-type: none">1. Swap 100 series with back and remove 2 line vehicles2. Rob to raise sirena's on cable trucks

SAFETY MEETING

Date: 17 October 2005
Location: Korumburra 2D
Crew: 401
Client: Karoon Gas
Conducted by: Mark Kneipp
Attendance: All
Meeting opened: 6.30 am
Meeting closed: 6.50 am

ACTION POINTS PREVIOUS MEETING

1. Arrange for extra road crew for tomorrow to work on line 08 - Done
2. Arrange Combined Crew Safety Meeting tomorrow - Done
3. Rob to raise sirena light on one cable truck – Completed

TOPICS DISCUSSED

Mark Kneipp (Party Manager)

- Crew will be on stand by until the fog lifts. There is no overlying cloud so it should not be around for too long.
- There is a school around station 630. It will be a 40k zone for the morning and afternoon. Just be aware of the extra traffic and of school kids running around.
- We are all on a main road so we have the third traffic management crew. One crew on each of the front and back crew and one crew with the vibes. The two new traffic control members are Emily and Damien. We also have DSS surveyors Razz and Mark.
- Another point highlighted yesterday with the road crew is the distance they can control with only two traffic controllers.
- Can everyone make sure they have revision two of the shooting order? Line 18 has been wiped and added a little more onto Line 13. We might be doing Line 3 and 4 after this line if it doesn't rain. But if it does we most likely go onto Line 16.

Nicky Byrne (HSE Advisor)

- Everyone should have a copy of the Emergency Phone numbers in their vehicle folder. If you do not please come and see me after the meeting and I will give you a copy.
- I would like to make sure everyone understands our emergency procedure in the event of an emergency situation. With the surveyors this procedure would not apply as you work in a separate area to the Line crew and operate as a small three man team. In your situation you carry mobile phones and would call the emergency triple O phone number. For the Line crew, vibes ops, and our Traffic Management crew I will explain how we should operate in an emergency situation. Frank in the recorder (dog box) is the co-ordinator. So after assessing the emergency situation you must call the recorder on the 2 way stating clearly: "EMERGENCY, EMERGENCY, EMERGENCY; Recorder do you have a copy". Upon hearing this on the two way everyone must stop work immediately and stand-by. Road crew will continue to control traffic until every vehicle and person is off the road safely and then stand-by. The person who called the emergency will need to clearly state their name, what the emergency is and give the location. Also state if anyone is injured and what emergency services are required. Frank will ensure all personnel are aware of the emergency situation and to stand-by on Channel 2. Frank will then contact the appropriate emergency services. If you can not copy Frank on the two way radio directly

or by relaying, on the emergency sheet you will find the Recorder's phone number. If that fails then you must call triple 0. The reason why the procedure is written that all emergency situations be called to the recorder is so Frank can let all crew personnel know to stand-by thus preventing a further accident. Frank can also send someone with first aid training who is close by to help. He also has GPS co-ordinates to give the exact location to the emergency services. Does anyone have any questions regarding the emergency procedure? Hopefully we will never have to be in an emergency situation.

Tom Pickett (Client Representative)

- If there is an emergency make sure everyone stays off the two way radio. It is important to have radio silence so that Frank can co-ordinate the emergency situation. No one should head down to the emergency location to see what's going on unless asked to or if it is agreed by Frank that you could be of some assistance.
- I would like to thank everyone on how its running, especially the traffic management how you co-ordinate with them. It is really good to see you are all working together.
- Just to reiterate the school. There will be a lot of parents dropping their kids off. Please be aware of them.

Gregg Farley (Able Traffic Management Operator)

- The distance we can control safely so that you can work in is eight hundred metres. If you can somehow co-ordinate with each other to pick up and lay out together would be ideal. Otherwise if the crew becomes too spread out. The crew at the front will have to stop work and stand-by somewhere safe while we re-position ourselves with the geophone or cable truck or who-ever might be behind. But if the geophone truck can work in with the cable truck it will be easier to control. There are a lot of blind corners and hills and it is a concern that I have. Because local traffic will not see you until they are right on top of you. And once the cars go pass they are not reducing their speed down to the 80k's we have put up. The permits only allow us to reduce traffic to 80k's.
This distance will help us to control the traffic and get them around you safer and it won't hold up local traffic either.
- Each crew will operate on a different channel so as not to interfere with each other.

Daniel Gorse (Able Traffic Management Operator)

- The vibe crew will operate on channel 8 again. Back crew will be on channel 9 and front crew on channel 7. We will see how this operates today. If we have to stop you to go and control another area we will try not to hold you up for too long. Yesterday I felt it was a too bigger area we had to cover so we will shorten the distance today and see how we go.

Del Hildred (Geophone Truck)

- Yesterday up the front Tony was driving behind my geophone truck warning traffic and it worked well because we don't need to stop. But when we scoop the geophones at the back I need to have someone to control traffic behind me.

Frank Whitehead (Observer)

- All crews should be able to keep together apart from the geophone truck. Let us know Del how you are going because if it is too hard to do it this way we will get the other jug truck going.

Tony Hutchison (Line Boss)

Everyone worked well yesterday. It was a successful line change.

MEETING CLOSED

ACTION POINTS
3. Observe New TM for Line Crew

SAFETY MEETING

Date: 24 October 2005
Location: Korumburra 2D
Crew: 401
Client: Karoon Gas
Conducted by: Nicky Byrne
Attendance: All
Meeting opened: 6.30 am
Meeting closed: 6.48 am

ACTION POINTS PREVIOUS MEETING

3. Arrange Safety Meeting for combined crews out in field tomorrow – Full attendance

TOPICS DISCUSSED

Nicky Byrne (HSE Advisor)

- Good morning everyone thank you for meeting here. It is the start of the week again. Traffic will pick up with extra cars on the road, school buses, school kids, tractors, milk trucks. We will be working on a main road. There is a milk transport depot just down from here on the out skirts of Poowong, so traffic will be heavy in that area. The surveyors have only one kilometre left to do on this line and will be moving onto a quieter country road. We are at the half way point of this contract if we include the postponed lines through the paddocks. All things considered the job has been going well. We had the near miss with the milk tanker at the start of the job and the incident last Thursday. That particular incident we were very lucky with the outcome, but the way in which the emergency was handled was efficient and credit to you all. What we need to learn from this, is to always be aware of your surroundings. Look out for the unpredictable third party traffic and communicate with each other. The traffic control team are in place to control the work area but everyone must still be aware of the many drive ways that vehicles may pop out of and third party irresponsible drivers who are perhaps too busy texting on their phone rather than concentrating on their driving.
- One safety point we need to keep in mind is where you park the vehicle. I have been discussing this with Able Traffic Safety officer Greg. I realise there are limited places where to park the car. When parking on a grass verge on the opposite side of the road there is a risk of crossing the road into oncoming traffic. This is acceptable if there is clear vision in front and behind. On the smaller roads where there is no grass verge to park the vehicle. It is safer to park the car on the correct side of the road rather than in the lane of oncoming traffic. This way the third party car can pass your parked vehicle and be driving at a safe distance from you working on the side of the road. The traffic controllers will warn the third party vehicles that there are workers and cars on the road before sending them through your work area.

Greg Farley (Able Traffic Management Safety Officer)

- All we are asking is that you keep to the same side that the traffic flows. When you can, try and park as far off the road as possible. This will help to get traffic around you safer. When there are cars parked on both sides of the road it makes it difficult to send vehicles particularly trucks through safely. So please try not to bottle neck the road. It will help us to control traffic safely through your work area.

Frank Whitehead (Observer)

- Everything has been going well. Back crew you are clear another load.

Tom Pickett (Client Representative)

- As Nicky mentioned with the incident last Thursday. It is a good wake up call for everyone. Although this is a busy road the next line is on the South Gippsland Highway. It is the worst road on the prospect in the way of busy traffic. Please be careful. This line is a good road visually, there are verges, but in places it narrows down and there are a few bridges.
- Chris at the pub where we have dinner has been really happy with everybody. It is a good reflection on Terrex so keep it up.

Damien Nash (Able Traffic Controller)

- It is very important that you communicate with your traffic team. If you need to go somewhere please let us know. On these busier roads we don't need any surprises. It must all be planned and controlled. Everyone is communicating with us but it will be very important on these busier roads.

Mark Lefebvre (Surveyor)

- It may be worth for the traffic teams to take a look at this line before tackling it as there are a few bridges.

Mark Kneipp (Party Manager)

- I got a valid complaint from Ian at the motel yesterday. If I hear of anyone defacing or intentionally making life difficult for him and he kicks you out and it is a valid reason I will not be finding alternative accommodation for you. I am uncertain if it was an accident the other night but one room had a bunch of soaked towels with urine on them sitting on the bathroom floor. If it was an accident please clean it up and go see him or leave a note.

Karen Turner (Vibe Operator)

- If they are soaking the towels they are probable hoping they will get washed. The motel are only washing the towels once a week and there is a sign saying if you want your towel washed leave it on the floor. But if you leave your towel on the floor it just gets hung up again. I highly doubt that there was urine it would have only been shower water.

John Phillipson (Vibe Technician)

- If you are sharing a room with people and he hangs the towels back up it is impossible to tell whose towel is whose.

Mark Kneipp

- The washing of the towels, Ian said he can only wash them twice a week. Now this should be sufficient as this is how it has always been done. The rest of the town are very happy with us. Work wise everyone has been doing a great job, keep it up.

MEETING CLOSED

ACTION POINTS

4. Tom to see dairy transport company and remind that we are working in the area
5. Observe parking of vehicles
6. Observe communication between Traffic Management and Line Crew
7. Discuss washing of towels with motel

SAFETY MEETING

Date: 31 October 2005
Location: Korumburra 2D
Crew: 401
Client: Karoon Gas
Conducted by: Nicky Byrne
Attendance: All
Meeting opened: 6.00 am
Meeting closed: 6.18 am

ACTION POINTS PREVIOUS MEETING
4. Organise more fruit - Completed

TOPICS DISCUSSED

Jon Turner (Party Manager)

- Everything seems to be going well out on line. Good work yesterday morning moving the spread smoothly and efficiently off line 19. There were no dramas with the vibes working through the narrow section yesterday which was good. We will be working on a major road again today. Be aware of the heavy traffic and take care.

Nicky Byrne (HSE Advisor)

- This morning we are holding the safety meeting without the traffic crew so they can set up the signs and get ready for the day. The Traffic team asked me to pass on two safety points. The first is a reminder to have the correct UHF channel when working or driving through each traffic controlled section. The second point is very important. Please do not work pass the traffic control operator. They realise you do work faster than they can set up at times but it is important to stop work and wait for the controllers to move up and reposition themselves. This is for your own safety. The traffic controllers will try to be efficient so as not hold you up for too long.
- We will be laying spread on the Strzelecki Highway today. The road is not as busy as the South Gippsland Highway but it is still a major road. The line runs for eight kilometres on the highway and there is a wide shoulder to work on. It will be up to each crew to work out with their traffic control team whether or not it is necessary to block one lane off. Near the start of the Strzelecki Highway there are two small bridges and ten stations at the end of the line where there is no shoulder to work on. The traffic teams will definitely need to block one lane off for you to work in on these sections. It is important for each crew to communicate with your traffic control team before setting out to work. If you feel safer having one lane blocked off please communicate this with your traffic team.

Simon Eberhardt (Back Crew)

- The cable truck batteries weigh twenty five kilos and can be heavy and awkward to lift on and off the cable truck. It may be safer and easier to get two people to lift the battery.

Tierre Whiu (Cable Truck)

- Lifting batteries requires correct lifting techniques by keeping the battery close to your body and bending at the knees. Stretching your muscles before attempting to lift any heavy equipment can help to prevent injuries.

Del Hildred (Jug Truck)

- Take care when driving. Look out for the traffic control vehicle and other road users on the narrow and windy roads as they tend to take up a good part of the road.

Adam Tooth (Vibe Operator)

- As mentioned yesterday from the inspection on the vibes. It would be good to get another siren light for the front of the vibe trucks so they can be easily seen from the front. The vibe trucks also require fire extinguishers. There was an order for high vis work shirts for the vibe operators. Would it be possible to re-order?

Shirley Bobrowski (Front Crew)

- Be careful when getting in and out of the vehicle. Especially if the road crew have not closed the lane off.

Nicky Byrne

- Shirley's point will be most important when working on the Strzelecki highway. Please be very careful including when you go to pull the vehicle into and out of the traffic.

Tony Hutchison (Line Boss)

- As Nicky mentioned make sure you communicate with your traffic control team. If you think they are too close to where you are working ask them to move back.

Frank Whitehead (Observer)

- For the line change can I get the cable and jug trucks to run full loads across to the next line as it will take a bit of time because of the distance.
- When we get onto the Strzelecki highway the crews will need to work close together again as we did on the Gippsland highway. Nicky will operate the other jug buggy so this can be achieved.

Rob Smith (Mechanic)

- Reminder for every vehicle to complete a full vehicle fit check. Complete the appropriate form and hand it in. Please include the kilometres and service due date. Write down in detail if anything needs attention, if the vehicle is driving funny, if anything is out of place.

Karen Turner (Vibe Operator)

- Can something be done to improve the lunches or perhaps can we get lunch money?

Jon Turner

- Unfortunately I can not give out lunch money. There is only approximately one week left on this job but I will talk to them about the lunches.

MEETING CLOSED.

ACTION POINTS

8. Sirena Light for vibrator trucks
9. Fire Extinguishers for vibrator trucks
10. High visibility work shirts for vibrator operators
11. Weekly vehicle fit checks
12. Organise lunches

SAFETY MEETING

Date: 7th November 2005
Location: Korumburra 2D
Crew: 401
Client: Karoon Gas
Conducted by: John Turner
Attendance: All
Meeting opened: 6.00 am
Meeting closed: 6.18 am

TOPICS DISCUSSED

Jon Turner (Party Manager)

- Another good day yesterday. We're on track with our schedule so we should finish tomorrow. Wednesday will be the vehicle wash down day. There are a few things to be done down at the work shed.
- The chaining notes will be most important on these last couple of lines. Cable, jug trucks and front crew make sure you refer to the chaining notes before going into any properties. There are a lot of hand carry sections.
- Ray will be out in the field today guiding the vibes.
- Everything has been going well out in the field, thanks to everyone. Keep up the good work.

Nicky Byrne (HSE Advisor)

- With only two days left on this particular job please do not become complacent. Everyone has been working really well.
- Daniel will be the only road traffic management working today. He will be mainly looking after the signs until we are off Line 3. Therefore it will be vitally important for everyone to drive defensively. These roads are minor quiet roads and most of the lines will be through private property. Please park right off the road so third party traffic won't be affected by our production. As Jon mentioned it will be most important for everyone to look at the chaining notes before entering any property. Please keep the vehicle to a walking pace when passing houses. There could be kids and pets around that you will need to look out for.
- A reminder to the vibes on Line 3 there is a power pole with a very low supporting wire that you will need a ground guide to help you pass under the wire safely.
- When you get to Line 4 Zorro's produce please use the north gate only for access. The gate is right next to their green shed and three large water tanks. Do not drive through their work area. Zorro's will have forklifts and tractors operating as well as a lot of ground personnel. Make sure you use the north gate and please drive slowly and carefully around their property.

Ray Auckram (HSE Advisor)

- Near the end of Line four there is access through a farmer's dairy and driveway next to his house. Drive very carefully through there look out for dogs and kids. Do not dust out his house.

Tony Hutchison (Line Boss)

- Good effort yesterday. It was excellent to see everyone pitch in and help each other out through these hand carry sections. Keep up the good work.

John Phillipson (Vibe Technician)

- The Toyota hundred series wagons tend to seize up if the low range gear is not used for a while. Who ever drives them this morning make sure you put them into low range for a small distance to help prevent this.

Tom Pickett (Client Representative)

- Line 3 between stations five hundred and five hundred and fifty there is a couple of hay paddocks. Please make sure you drive on the Line or the fence line only. Do not drive straight across the farmer's paddock.
- Be aware of electric fences.

MEETING CLOSED.

APPENDIX F

VEHICLE LIST

VEHICLE	USED FOR	REGISTRATION
Land Cruiser Tray Back	Cable Truck	1BRD 044
Land Cruiser Tray Back	Cable Truck/PM	1BGO 007
Land Cruiser Tray Back	Cable Truck	1BSJ 242
Land Cruiser 100 Series	Front Crew	1BOB 567
Land Cruiser Tray Back	T/Shooter	1BRJ 753
Land Cruiser Tray Back	Jug Ute	1BHD 550
Land Cruiser Tray Back	Jug Ute	1BEK 496
Land Cruiser 100 Series	Back Crew	1BYK 183
Land Cruiser 100 Series	Vibe Crew	1 BWF 930
Hertz Toyato Hilux	Cab Rp/Mechos	2LX-892
Toyota Tray Back	Line Boss	310-IJX
Isuzu FTS 700	Service Truck	ALU 225
Paystay	Spread Truck	626-JAH
Paystar	Spread Truck	371JCN QLD
International Paystar	Vibrator	372 JCN QLD
International Paystar	Vibrator	373JCN QLD
International Paystar	Vibrator	375 JCN QLD
International Paystar	Vibrator	376 JCN QLD
Izusu STF	Recorder	1CAA 534
Izusu FTS	Mechanics wkshop	1CCC561

APPENDIX G

CREW LIST

#	POSITION	NAMES	DAYS ON CREW
1	Crew Manager	Kneipp Mark	23
2	Crew Manager	Turner Jon	12
3	HSE Advisor	Auckram Ray	0
4	HSEAdvisor	Byrne Nicky	34
5	Mechanic	Smith Rob	34
6	Mechanic	Screagh Tony	2
7	Observer	Whitehead Frank	33
8	Jnr Observer	Helme Nik	4
9	Cable Repair	Darren Rea	34
10	Cable Repair	Hildred Del	0
11	Vib Op	Toth Adam	34
12	Vib Op	Anderson Peter	34
13	Vib Op	Parityn Clive	34
14	Vib Op	Turner Karen	34
15	Vib Tech	John Phillipson	34
16	Vib Tech	Dennis Corbin	5
17	Vib Tech Jnr	Doug Crispe Jnr	20
18	Line Boss	Hutchison	34
19	Line Boss	Pope Justin	0
20	Line Crew	Bobrowski Shirley	34
21	Line Crew	Carl Tapping	13
22	Line Crew	Chris Grams	20
23	Line Crew	Anita Crispe	20
24	Line Crew	Ashley Crisp	20
25	Line Crew	Doug Crispe Snr	20
26	Line Crew	Eberhardt Simon	33
27	Line Crew	Hildred Del	33
28	Line Crew	Judson Nicola	20
29	Line Crew	Nick Dore	25
30	Line Crew	Peters Benjamin	20
31	Line Crew	Pitt Ruth	25
32	Line Crew	Pope Justin	34
33	Line Crew	Ray Auckram	6
34	Line Crew	Ricardo Morris	34
35	Line Crew	Tierre Whiu	34
36	Line Crew	Toll Simon	33
37	Line Crew	Ty Nisbet	33

KAROON GAS - KORUMBURRA 2D SEISMIC SURVEY - STATISTICS

Date	Travel Time	Experimentals	Recording Time	Vibes	WOS	Recorder Shutdown	Recorder Move	Safety & Other Charge	Line Change	Detours & Terrain	Other	Inductions	Troubleshoot	Laying Out, QC & Pickup Spread	Weather Time	Total Stand-by Rate	Total Extra Charges	Total Downtime	Total Operational Hours	Total Km's
8 October 2005	0.50			4.00				0.30				0.50		4.20		0.30	0.50	4.00	5.50	-
9 October 2005	1.00	2.70		1.90				0.30					0.30	6.80		0.30	2.70	2.20	13.00	-
10 October 2005	1.10		6.00	1.80		0.10	1.90	0.30					1.30			0.30	-	3.20	12.50	6.3720
11 October 2005	1.00		7.80	0.80			1.40	0.30					0.40		0.60	0.90	-	1.20	12.30	9.1320
12 October 2005	1.30		7.80	0.70		0.10	1.60	0.30								0.30	-	0.80	11.80	8.7240
13 October 2005	1.10		7.40	0.60		0.30	0.60	0.30					1.10			0.30	-	2.00	11.40	8.3040
14 October 2005	1.20		8.60	0.40			1.40	0.30					0.80			0.30	-	1.20	12.70	10.2240
15 October 2005	1.00		8.30		0.50		1.20	0.30		0.20			0.50			0.30	-	1.00	12.00	9.0240
16-Oct-05	1.00		8.30	0.50			1.50	0.30					0.40			0.30	-	0.90	11.10	9.9960
17-Oct-05	1.10		7.80				0.40	0.30							2.20	2.50	-	-	11.80	8.3400
18-Oct-05	1.20		9.30	0.60	0.20	0.10	0.60	0.30								0.30	-	0.90	11.40	11.2080
19-Oct-05	1.40		8.00		0.90		1.00	0.30					0.50		0.20	0.50	-	1.40	10.90	9.3120
20-Oct-05	1.80		8.60	0.80			0.70	0.30								0.30	-	0.80	11.40	10.1040
21-Oct-05	1.20		7.00	1.30			1.50	0.30							1.20	1.50	-	1.30	11.20	9.3360
22-Oct-05	1.10		7.60	1.20			0.50	0.30							0.80	1.10	-	1.20	10.30	8.5200
23-Oct-05	0.90		8.90	0.70			1.20	0.30								0.30	-	0.70	11.30	10.3560
24-Oct-05	1.80		8.90	0.10			1.20	0.30								0.30	-	0.10	12.20	10.8960
25-Oct-05	1.10		7.40	0.60	0.70		1.30	0.30			0.20		0.40		0.50	0.80	-	1.70	10.80	8.6040
26-Oct-05	1.10		2.70	0.80				0.30							7.00	7.30	-	0.80	11.10	3.6000
27-Oct-05	1.40		7.20	0.70	0.40		0.90	0.30			0.60				0.50	0.80	-	1.10	10.90	8.6280
28-Oct-05	1.50		7.90	0.40	0.80		0.90	0.30								0.30	-	1.20	10.60	10.2120
29-Oct-05	1.20		1.50					0.30					0.70		7.10	7.40	-	0.70	10.10	1.9920
30-Oct-05	1.90		6.30		1.30		0.90	0.30	0.30						1.00	1.30	-	1.30	10.70	7.3200
31-Oct-05	1.70		8.60					0.30	1.10				0.60			0.30	-	0.60	11.70	9.1200
01-Nov-05	1.30		6.20	0.60			0.60	0.30							3.00	3.30	-	0.60	11.40	6.9000
02-Nov-05	1.50		8.50	0.60				0.30	1.10							0.30	-	0.60	11.40	9.7800
03-Nov-05	1.20		3.30					0.30	1.10				1.00		5.10	5.40	-	1.00	11.00	3.7200
04-Nov-05	1.40		9.00	0.20			0.50	0.30					0.80			0.30	-	1.00	11.20	10.3200
05-Nov-05	1.20		9.50	0.60			0.60	0.30								0.30	-	0.60	11.60	10.8000
06-Nov-05	1.00		7.70	0.60				0.30	1.90							0.30	-	0.60	10.90	9.5160
07-Nov-05	0.80		10.70	0.20	0.60		0.50	0.30	0.60				0.30			0.30	-	1.10	12.90	13.5600
08-Nov-05	1.00		0.40				0.30	0.30						2.50		0.30	-	-	2.00	1.5360
Total	39.0000	2.7000	217.2000	20.7000	5.4000	0.6000	23.2000	9.6000	6.1000	0.2000	0.8000	0.5000	9.1000	13.5000	29.2000	38.8000	3.2000	35.8000	351.1000	255.4560