

**PROPOSAL FOR
AIRBORNE LASER SCANNING AND
IMAGERY
FOR
MMG WESTERN TAS TENEMENTS**

Our Ref: Q1069 rev3

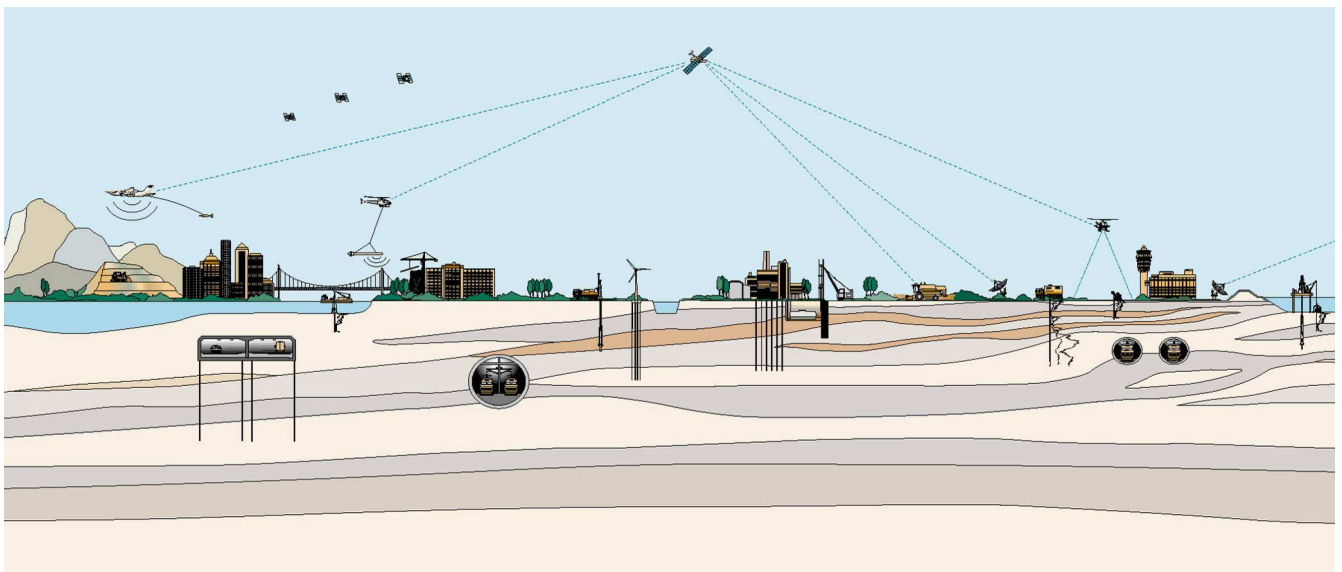
Prepared for : **MINERALS AND METALS GROUP**

Prepared by : Fugro Spatial Solutions Pty Ltd
Level 7, 390 St Kilda Rd
MELBOURNE VIC 3004

Date of Proposal : 14 December 2010

Checked : M De Lacy

Authorised : S Clode



This document is confidential. The copyright © therein is vested in Fugro Spatial Solutions Pty Ltd, West Perth. All rights reserved. Neither the whole, nor any part of this document may be disclosed to any third party nor reproduced, stored in any retrieval system or transmitted in any form nor by any means (electronic, mechanical, reprographic, recording nor otherwise) without the prior written consent of the copyright owner.



Ref: Q1069_MMG_Rosebery_LiDAR survey_rev3

14 December 2010

MMG | Minerals and Metals Group
Po Box 21,
Rosebery, Tas, 7470
Australia.

Level 7, 390 St Kilda Road
Melbourne
Victoria, 3004
Phone: 61-3-9870 0610
Facsimile: 61-3-9870 0641

Attention: Mr Kent Wighton

Dear Kent

ALS SURVEY – MMG WESTERN TAS TENEMENTS

Thank you for the opportunity to confirm the fees to supply Lidar and Imagery data for the above project.

1.0 SCOPE OF WORK

For this project Fugro Spatial Solutions shall.

- Plan and fly an ALS survey over the full project area (approx 230 sqkm).
 - Supply 2m DEM in ASCII
 - Supply ModelKeyPoints in ASCII
 - Supply 0.5m Contours in DXF
- Plan and Fly an Imagery survey over the Rosebery Mine and surrounds (approx 130 sqkm)
 - Supply 25cm ortho imagery
 - Supply optional plots
- Undertake all Ground survey requirements

2.0 **CHARGES**

The charges shown do not contain GST. Fugro reserves the right to alter the charges if changes to the volume or scope of work occur, before or after the acceptance of this proposal.

2.1 **LIDAR**

- Plan and fly ALS (Airborne Laser Scanner) over all areas, Approx 230 km²
- Supply deliverables

Fee \$99,700

2.2 **IMAGERY**

- Plan and fly 25cm Imagery Survey over eastern areas, Approx 130 km²
- Supply 25cm Ortho imagery

Fee \$32,800

2.3 **Laminated enlargement Plots**

Less than A0: Cost: 1-5 Copies: \$170ea ex GST, 5-20+ Copies \$160ea ex GST
A0 size: Cost: 1-5 Copies: \$200ea ex GST, 5-20+ Copies \$190ea ex GST
Larger than A0: Cost: 1-5 Copies: \$350ea ex GST, 5-20+ Copies \$330ea ex GST

** This quotation is valid for 5 days.

Sites listed in Appendix B.

Also attached in files

Q1069_MMG_Tassie_imagery.dxf

Q1069_MMG_Tassie_LIDAR.dxf

MMG_TENEMENTS_TAS_FUGRO_20101110.xls

3.0 DIGITAL AERIAL SURVEY

Fugro own and operate 6 specially modified aircraft for various air survey operations, and have two Lidar systems and three digital image sensors at our disposal. We have sufficient resources and redundancy to work on your project.

4.0 LASER SCANNING PARAMETERS



Airborne Laser Scanner Global Parameters

Nominal Flying height	2136m AGL
Medium	External HDD or DVD's
Navigation Mode	GPS based
Positioning Mode	DGPS
Vertical Accuracy	+/- 0.20m
Horizontal Accuracy	+/- 0.40m

5.0 COORDINATION

Fugro Spatial Solutions will coordinate the control points suitable for the ground truthing required for the Lidar project.

The control will be coordinated by observing static GPS baselines solutions connected into the State geodetic network. The horizontal coordinate system will be MGA GDA94 and the vertical coordinate will be Australian Height Datum.



Conversions from GPS derived Ellipsoidal height to AHD will be carried out applying the AUSGeoid09 Geoid Model (N Value). AHD values will be a function of the accuracy of the geodetic network within the area and the accuracy of the N Value model throughout the region.

The control points are expected to be on or near public roads therefore it is assumed there will be no problem or time lost associated with access to all the sites and there will be no external safety inductions required.

*Should time be lost due to uncontrollable factors such as weather, destroyed tracks or limited access, hourly rates for personnel and equipment will be charged as detailed below.

**Survey Crew and equipment
Food and Accommodation**

**\$2050/day or \$202/hour
Cost +10%**

6.0 ALS OBSERVATIONS

Fugro Spatial Solutions Pty Ltd will fly the project with an airborne laser scanner (ALS) and will use the ALS observations to generate a ground model (DEM) over the site with the vertical accuracy outlined above. Point cloud data will be classified into ground and non ground coverage classed and the ground coverage class will be utilized for DEM generation.

Fugro will capture the project with a **nominal average point density per flight line** of 1.5 points per square metre. This value is an average density based upon the resultant “zig-zag” scan pattern of galvanometer based ALS systems. The nominal size of the footprint of each ALS return will be 0.3m. It should be noted that these figures can only be quoted nominally due to variations if the aircrafts altitude above the terrain, and variations in aircraft speed and heading.

We would like emphasis the meaning of the accuracy statements made above. Where a vertical accuracy of +/- 0.20m is quoted, this means 67% (or 1σ) of all observations will be within +/- 0.20m of their true elevation. A 95% confidence level (or 2σ) will suggest that 95% of all observations are within +/-0.40, (2 x 0.20m) of true elevation. Accuracies quoted are absolute. We would expect relative accuracies to be of a higher order. This accuracy will be achieved in clear, level and un-obscured areas. Where the Lidar strikes water bodies no returns will be resolved.

Fugro have based our quality statements in accordance with ASPRS Vertical Accuracy Guidelines for ALS Surveys. Fugro encourage the development of industry wide ALS standards such as those printed by ASPRS to ensure confidence that works are conducted to a known and accepted standard.

7.0 ALS DATA PROCESSING

Acquired point cloud data will be processed using commercial off the shelf software and associated CAD packages specially designed to handle point cloud data. This includes many in-house developed applications to increase the accuracy of the edited dataset and reduce processing time.

Each laser ‘range’ is Georeferenced upon acquisition and recorded in up to 4 returns. The point cloud is then processed to the two different coverage classes, being ground and non ground. Only the ground elevations are used to determine the ground surface model.

The ground surface model can be output in a variety of GIS formats, however ASCII XYZ space delimited files are generally the most compatible.

8.0 IMAGERY

Imagery will be capture over the Rosebery mine site only, with a separate flight, and imagery generated at 0.25m resolution. The mosaic digital images shall be colour balanced to remove colour discrepancies at joins and edges.

All data will be supplied as ECW files.
Plots can be supplied as required.

9.0 DELIVERABLES

Product	Item	Format	Media	Projection
LIDAR				
Digital Terrain Model	Lidar ground model key points	ASCII	DVD	MGA94/55+AHD
Digital Elevation Model	2m Gridded DEM	ASCII	DVD	MGA94/55+AHD
Vertical Accuracy	+/- 0.20m at 1 σ			
Horizontal Accuracy	+/- 0.40m at 1 σ			
Contours	0.5m	DGN		MGA94/55+AHD
Report	Metadata	PDF		
IMAGERY option				
Orthoimage	0.25m GSD RGB	ECW	DVD	

10.0 TIMING

An ALS system will be available from January 2011 onwards. Fugro will require confirmation of this project as soon as is possible to ensure equipment availability.

Should the system not be available during the requested time, we will recommend the next available opportunity, subject to weather conditions.

ALS data will then be acquired as soon as favourable weather conditions prevail. Data will be available within 8 – 10 weeks of capture.

A separate Imagery system will be mobilised from January 2011 onwards to capture the imagery.

Imagery data will then be acquired as soon as favourable weather conditions prevail. Data will be available within 8 – 10 weeks of capture and completion of the ALS survey.

This timing is subject to production scheduling at the time of contract award, this will be confirmed upon receipt of your order to proceed.

11.0 PAYMENT TERMS AND CONDITIONS

Payments conditions that are acceptable to MMG and Fugro are suggested as follows:

- 50 percent of the lidar price (2.1): on award of contract, and presentation of our invoice.
- 50 percent of the imagery price (2.2): on award of contract, and presentation of our invoice.
- 50 percent of the lidar price(2.1): within 30 days after the delivery of all final deliverables, and presentation of our invoice.

Any engagement pursuant to this proposal would be subject to Fugro Spatial Solutions' Standard Terms and Conditions of Contract (FSSQ-CR-1301) unless otherwise agreed.

These Conditions can be found attached to this proposal.

If we prove to be successful we look forward to the opportunity of working with your company.

Please do not hesitate to contact me should you require further information.

Yours Sincerely



Michael De Lacy

Business Development Executive

Mobile +61 (0) 409 006 177

Direct +61 (0) 3 9780 0610

Email: m.delacy@fugrospatial.com.au

Appendix A	General Conditions of Quote
Appendix B	Areas of Coverage
Appendix C	FSS Standard Conditions of Contract

APPENDIX A

A. Data Acceptance

Unless otherwise agreed, the acceptance period for any work performed by Fugro Spatial Solutions shall be ninety (90) days, after which the work shall be deemed as accepted. This assurance applies only to unaltered original work as provided to the Client by Fugro Spatial Solutions.

Any supplied data is to be used only for the purpose for which it was commissioned and in accordance with the terms of engagement. Use of any supplied data for purposes other than those stated is entirely at the risk of the Client.

Copies of the data requested after archive will incur a retrieval fee of \$300 plus the cost of distribution, to be confirmed formally on request.

B. Copyright

Fugro Spatial Solutions Pty Ltd does not release locations or details of projects to third parties without permission from clients. This ensures the copyright of coverage, scale, date and quality you obtain from any project is solely your and not freely available within the market place. Intellectual rights in production methods will be vested with Fugro Spatial Solutions Pty Ltd. The client shall have full Intellectual Property rights and ownership of all contract generated material produced as part of this project. Fugro Spatial Solutions Pty Ltd undertakes the development of specialist software, hardware and production methods which may improve the provision of service during this contract and this information is not included. Intellectual property is limited to the deliverables as set out in Deliverables.

C. Project Management and Quality Assurance

Fugro Spatial Solutions conforms to the ISO9001:2000 Business Management System and Quality Assurance and is regularly audited by Benchmark Certification Pty. Ltd. All work adheres to specific Project Management and Quality Assurance principles as defined by this system and we continually strive to be in line with industry best practice. A project manager will be assigned to your work and will act as the single point of contact for the duration of the project. Using these methodologies, Fugro Spatial Solutions is able to provide a consistently high quality product and service.

D. Health Safety and Environment

Fugro Spatial Solutions has Certification for both the Australian Standard AS/NZS 4801:2001 and the International Standard OHSAS 18001:1999.

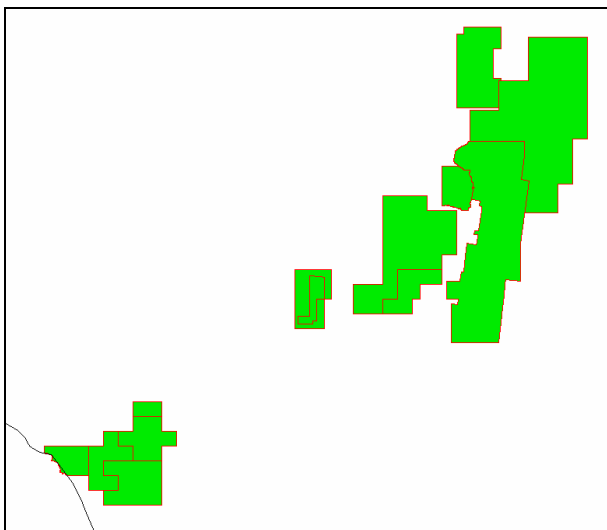
Fugro worldwide has adopted a uniform structure for Health Safety Environment Management System to ensure appropriate standards are met by each operating company. Fugro Spatial Solutions has an obligation to maintain its own Health Safety Environment Management System which will comply with both the land work environment Health Safety and Environment standards and the airborne work environment Health Safety and Environment standards.

E. Insurance

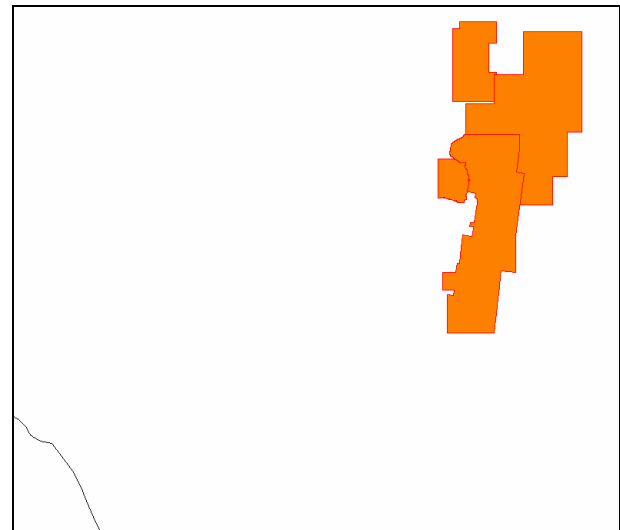
Fugro Spatial Solutions holds current insurance for Workers Compensation, Public Liability and Professional Indemnity.

APPENDIX B AREAS OF COVERAGE

Locality	Lease	Approximate_ Area_Hectares	Lease_Name	Project	Lidar	Aerial Photography
TAS	28M/1993	4906	Rosebery	Rosebery	YES	YES
TAS	6M/2008	547	Rosebery Tailings	Rosebery	YES	YES
TAS	EL48/2004	1400	Mt Kershaw	Rosebery	YES	YES
TAS	ERA833s	6129	Lake Rosebery	Rosebery	YES	YES
TAS	3M/2003	400	Avebury	Avebury	YES	NO
TAS	6M/2007	400	East Avebury	Avebury	YES	NO
TAS	EL50/2007	700	Godkin	Avebury	YES	NO
TAS	EL5/2002	2400	East Renison	Avebury	YES	NO
TAS	EL37/2003	1100	Little Henty/Fen Creek	Avebury	YES	NO
TAS	EL43/1992	800	Melba Flats	Avebury	YES	NO
TAS	EL22/1997	800	Trail Harbour	Avebury	YES	NO
TAS	EL28/1988	1300	Zeehan	Avebury	YES	NO
TAS	RL5/2009	2011	Melba Siding	Avebury	YES	NO



Lidar Area (230 km2) Green



Imagery area (130 km2) Orange



APPENDIX C: STANDARD TERMS AND CONDITIONS

CONDITIONS OF CONTRACT AND DEFINITIONS

"The Company" is the client with whom Fugro Spatial Solutions Pty Ltd have or intend to enter a contractual agreement ("Contract") the subject of these conditions of contract ("Conditions").

"Fugro Spatial Solutions" means any member company of the Fugro Group as set out in the documents evidencing the Contract.

The Company agrees that the Conditions set out below and the Schedule of Rates and any written correspondence between The Company and Fugro Spatial Solutions (unless otherwise agreed in writing) form part of the terms and conditions of the Contract between the Company and Fugro Spatial Solutions.

1 SCHEDULE OF RATES

1.1 Unless otherwise stated, Government charges, statutory fees, duties, excise, royalties, taxes, licenses, permits and registration fees are not included in the rates given in the Schedule of Rates.

1.2 Unless otherwise stated, hire charges for personnel and equipment commence from the date of dispatch from the point of mobilisation.

2 GST

2.1 Rates set out in the Contract and the Schedule of Rates are exclusive of the Australian Goods and Services Tax (GST) unless otherwise stated.

3 RISE AND FALL

3.1 Fugro Spatial Solutions reserves the right to adjust the rates given in the Schedule of Rates for inflation based on the movement in the Australian Consumer Price Index (CPI) or for any increase in Surveying Industry award rates or the Pilots GA Award, which exceed CPI movements, from the date that the Contract is entered into by the Company and Fugro Spatial Solutions.

4 THIRD PARTY COSTS

4.1 Third Party costs not included in the rates given in the Schedule of Rates shall be payable at cost plus ten percent (10%).

5 VALIDITY

5.1 Unless otherwise specified in writing Fugro Spatial Solutions tender submissions are valid for a period of thirty days (30) from the date of the tender submission.

6 SITE SAFETY

6.1 Fugro Spatial Solutions have allowed for Site Safety Procedures as detailed in the Fugro Spatial Solutions Safety Management System. A copy of relevant portions is available upon request.

6.2 Any requirement of Fugro Spatial Solutions by the Company to implement safety procedures over and above those detailed in the Fugro Spatial Solutions Staff Safety Manual that attracts additional cost, will be payable by the Company.

7 CONTRACT AWARD

7.1 Any acceptance, either written or verbal of the Contract shall be deemed an acceptance of the Conditions herein.

7.2 Fugro Spatial Solutions reserves the right to charge a daily standby fee to The Company in the event that The Company decides to delay a previously stated project start date.

8 MOBILISATION/DEMobilISATION

8.1 Unless otherwise stated, Mobilisation/ Demobilisation charges for personnel and equipment shall be from the closest of Fugro Spatial Solution's offices in Perth or Brisbane. Where Mobilisation/Demobilisation takes place from a place other than Perth or Brisbane additional charges for accommodation, freight, insurance, handling and any other related expenses Fugro Spatial Solutions reserves the right to charge these costs to the Company.

8.2 Seven (7) days notice is required by Fugro Spatial Solutions prior to mobilising to the site and prior to remobilising after major interruptions to the continuity of the work, unless otherwise agreed.

8.3 The rates provided for the survey works in the Schedule of Rates are based on continuous work and uninterrupted access at the site. Any interruption or disruption to the continuity of the works by others (e.g. other subcontractors, consultants, engineers etc) will be chargeable in accordance with the hourly or daily rates given in the Schedule of Rates. A minimum charge of four (4) hours will apply.

9 SITE VARIATIONS

9.1 No work, additional to the Contract scope, shall be performed by Fugro Spatial Solutions without written confirmation or signed site instruction from the Company or its authorised representative.

10 SPECIFICATIONS

10.1 The specification to which the work is to be carried out, and any subsequent modifications to those specifications, must be agreed in writing.

11 AVAILABILITY

11.1 Should any equipment or personnel detailed in the Contract be unavailable, Fugro Spatial Solutions reserves the right to substitute equipment or personnel equal to that detailed in the Contract.

12 HOURS OF WORK

12.1 The pricing in the Contract is based on a 5 day, 38 hour working week, worked between 7am and 6pm with 1 hour for lunch.

13 PERSONNEL

13.1 During the term of the Contract, the Company agrees not to employ or offer employment to Fugro Spatial Solutions personnel, either staff or subcontractors.

14 STORAGE

14.1 After the satisfactory completion of a contract, all data relating to the Contract will be retained by Fugro for a minimum period of 12 months. Data may be stored for longer periods depending upon specific arrangements made on a case-by-case basis.

15 DELIVERABLES AND COPIES

15.1 The contract deliverables (including the number of copies) are stated within the contract documentation specific to an individual project. Fugro Spatial Solutions will provide additional digital or analogue copies outside of specific project contract requirements at cost plus ten percent (10%). Costs may include retrieval from archive, intermediate processing, printing, scanning, supply media and postage & handling.

16 DATA ACCEPTANCE

16.1 Unless otherwise agreed, the acceptance period for any work performed by Fugro Spatial Solutions shall be ninety (90) days, after which the work shall be deemed as accepted. This assurance applies only to unaltered original work as provided to the Company by Fugro Spatial Solutions

16.2 If within the data acceptance period an error or mistake occasioned by Fugro Spatial Solutions' personnel or equipment or subcontractors personnel or equipment in providing goods and services under the Contract, Fugro Spatial Solutions' liability shall be limited to Fugro Spatial Solutions' costs relating to the rework of the work executed erroneously.

16.3 Any supplied data is to be used only for the purpose for which it was commissioned and in accordance with the terms of engagement. Use of any supplied data for purposes other than those stated is entirely at the risk of the Company.

17 COPYRIGHT & INTELLECTUAL PROPERTY

17.1 Unless otherwise agreed, all intellectual property created by Fugro Spatial Solutions during the term of this Contract remains the property of Fugro Spatial Solutions.

17.2 Unless otherwise agreed, and in the case of Aerial Photography, the original exposed film or electronically gathered image data shall be retained by Fugro Spatial Solutions, for period of not less than seven (7) years. The Company assumes copyright of the imagery contained on such film or image data, once the account has been paid in full.

18 PAYMENT AND RETENTION MONIES

18.1 Payment for invoiced work performed shall be made within thirty (30) days of the date the invoice was raised by Fugro Spatial Solutions provided credit facilities have been granted to The Company by Fugro Spatial Solutions otherwise payment is due in full on the invoice date.

18.2 In the event that the Company fails to pay within the 30 days and does not provide a satisfactory explanation, then Fugro Spatial Solutions at its sole discretion may deem this to be a breach of the Contract and terminate the Contract immediately and recover the monies owing through any lawful means.

18.3 Fugro Spatial Solutions reserves the right to charge an administration fee at a rate of two percent (2%) per month on overdue invoiced monies.

18.4 Invoices shall be paid in full without retention unless otherwise agreed to in writing by Fugro Spatial Solutions.

18.5 Any costs involved in collecting outstanding debts will be charged to and paid for by the Company.

18.6 Account queries will only be accepted within 10 working days of receipt of invoice. After this time, we will assume the debt due, in full, by the due date. Furthermore, we do not accept that a query on a part of an invoice/account is sufficient reason for non-payment. Where such adjustment is necessary, we expect the balance of the amount owing to be paid.

19 CREDIT TERMS

19.1 Credit facilities may be granted after completion of our Credit Application Form.

19.2 Until a satisfactory trading pattern is established with our Company, non-payment of an account within the specified payment terms may result in credit facilities being suspended or withdrawn.

19.3 Approved credit limits are to be strictly adhered to unless otherwise arranged and agreed upon. Where an account has reached its set limit, further work will only be undertaken when the account has been reduced or cleared or on cash only basis.

19.4 We give credit to you as our customer. We are not able to give credit on the basis that we are paid when you are paid unless prior acceptable arrangements have been made.

19.5 Transferral of ownership of an account can only take place if prior acceptable arrangements have been made with Fugro Spatial Solutions.

19.6 If you act on behalf of another Company, the true ownership of the debt must be established prior to the commencement of work being carried out. Transferral of debt will not be considered where the party involved does not have an established credit account with our Company.

20 LIQUIDATED DAMAGES

20.1 Liquidated Damages shall not be applicable to the Contract.

21 FORCE MAJEURE

21.1 Fugro Spatial Solutions, in the execution of the Contract, shall not be liable for any delay or loss in providing goods or services under the Contract as a result of Force Majeure Events. A Force Majeure Event is defined as follows:

21.2 Acts of God (including inclement weather and cyclones as defined in clause 21.3), fires, earthquakes, floods, accidents, acts of war, civil commotions, strikes or other industrial actions, bans or limitations on work, mechanical or electrical equipment failure which could not have been prevented by regular care and maintenance, radio interference, lack of access to spare parts or technical expertise to remote locations, changes in award rates, all of the above being a cause or causes which could not reasonably have been foreseen by Fugro Spatial Solutions and which could not be overcome by using sound business practices

21.3 Inclement weather is defined as climatic conditions that do not permit work to be carried out to the standards required by the specification set out in the Contract.

21.4 Fugro Spatial Solutions shall be entitled to full payment during Force Majeure Events. Where applicable the rates given in the Contract Schedule of Rates shall apply to this Contract.

22 CONSEQUENTIAL DAMAGES

22.1 Notwithstanding any other provision of the Contract to the contrary, neither party shall be liable to the other in tort, contract or otherwise at law, for any special or consequential losses or damages, however caused, including without limitation, loss of use, production, product or profit.

23 APPLICABLE LAW AND ARBITRATION

23.1 This Contract shall be governed in accordance with the laws of the Commonwealth of Australia and the State of Western Australia unless the contract is to be performed wholly within another State in which case the laws of that state shall apply.

23.2 Should a dispute be unresolved by mutual discussion the matter shall be brought before an independent arbitrator agreed by the parties for resolution of the dispute. If the parties cannot agree on an arbitrator within 14 days then The Institute of Surveyors Australia shall nominate an arbitrator.

24 COMPANY DETERMINATIONS

24.1 The Company agrees to be fair and reasonable in the implementation of any and all terms and conditions of the Contract, these Conditions and the Schedule of Rates.

25 INSURANCE

25.1 Fugro Spatial Solutions holds in the least the following insurances:

- a) Professional Indemnity
- b) General Public & Product Liability
- c) Workers Compensation or the equivalent of for the location where the work is being performed.
- d) Motor vehicle third party and third party property damage
- e) Industrial Special Risks
- f) Marine Cargo
- g) Aviation Hull Liability

25.2 In the event of loss or damage as a result of negligence on the part of the Company then the Company shall be deemed liable